PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
ARP2343

COMPACT DISC JUKEBOX
CJ-V55LR
KU

- **Refer to the service manuals ARP1913 for CJ-V55 (PD-MV55) and ARP1912 for CJ-V55 (SERVICE MANUAL (1)).**

- **This manual is applicable to KU type.**
- **The CJ-V55LR mainly differs from the CJ-V55 in having two CD players, a coin acceptor and a bill acceptor.**

CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

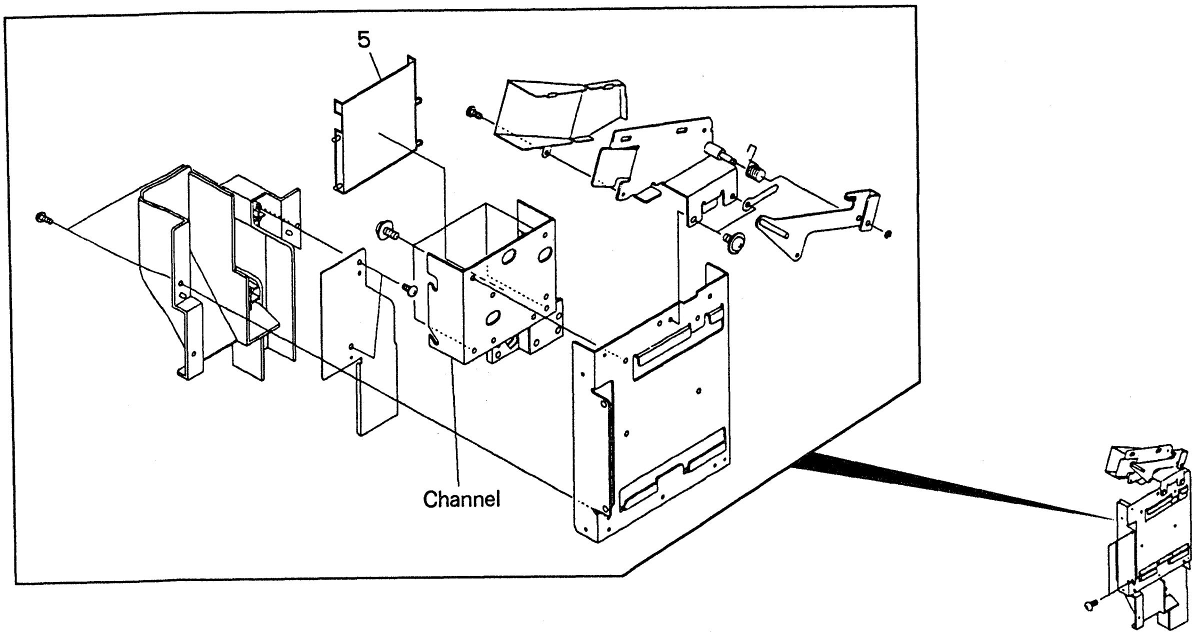
CJ-V55LR/KU and CJ-V55/KUC have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		CJ-V55 /KUC type	CJ-V55LR /KU type	
	Pad	• • • •	DHA1157	1
	Packing case	DHG1229	DHG1320	2
	Packing cap	DHG1200	DHG1326	3
	Accessories case	• • • •	DHK1055	4
	Coin acceptor	• • • •	DXB-134	5
	Bill acceptor	• • • •	DXB1360	6

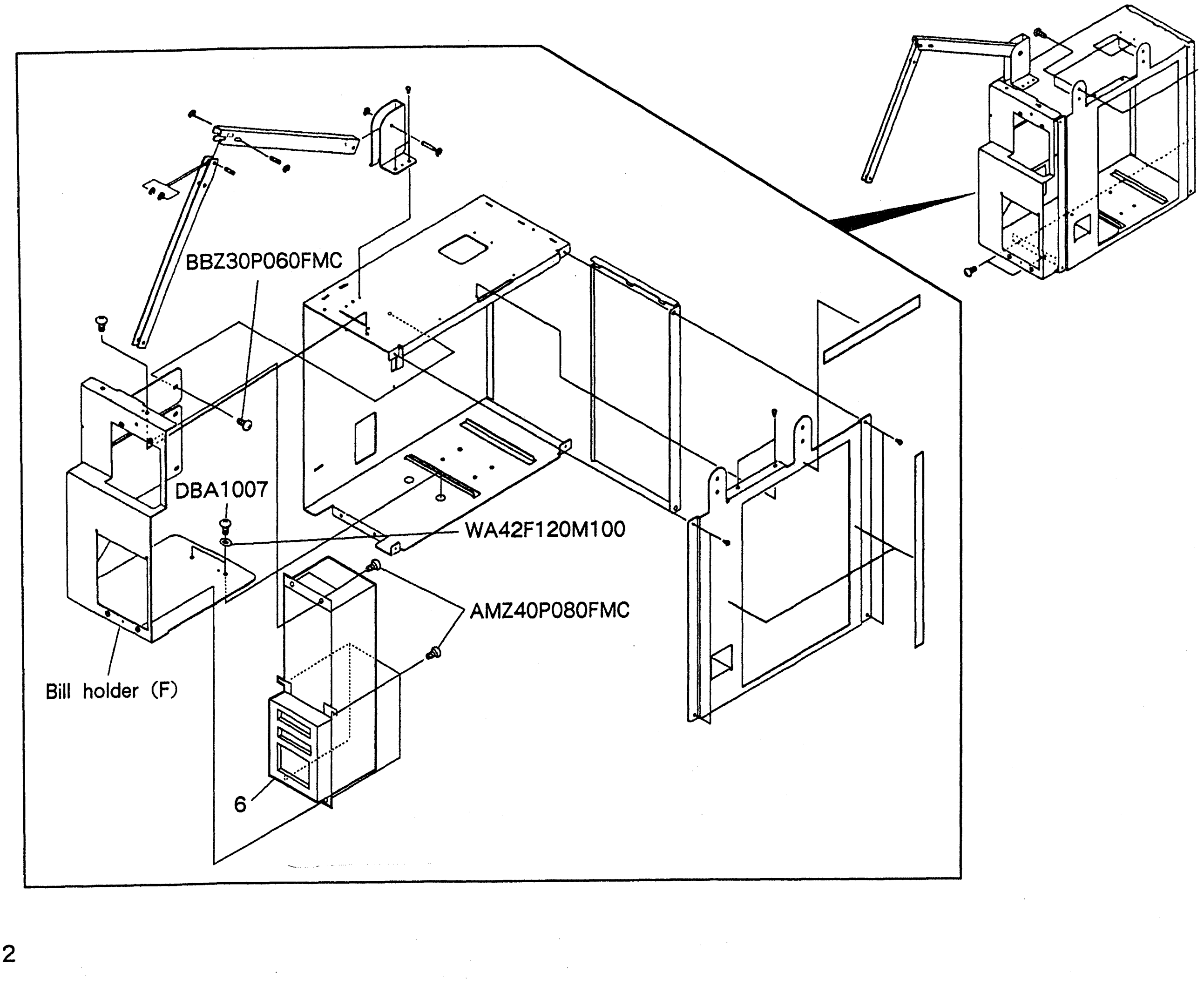
Note: The numbers shown in the "Remarks" column refer to those in the figures in the subsequent pages.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
© PIONEER ELECTRONIC CORPORATION 1991
IFI SEPT. 1991 Printed in Japan

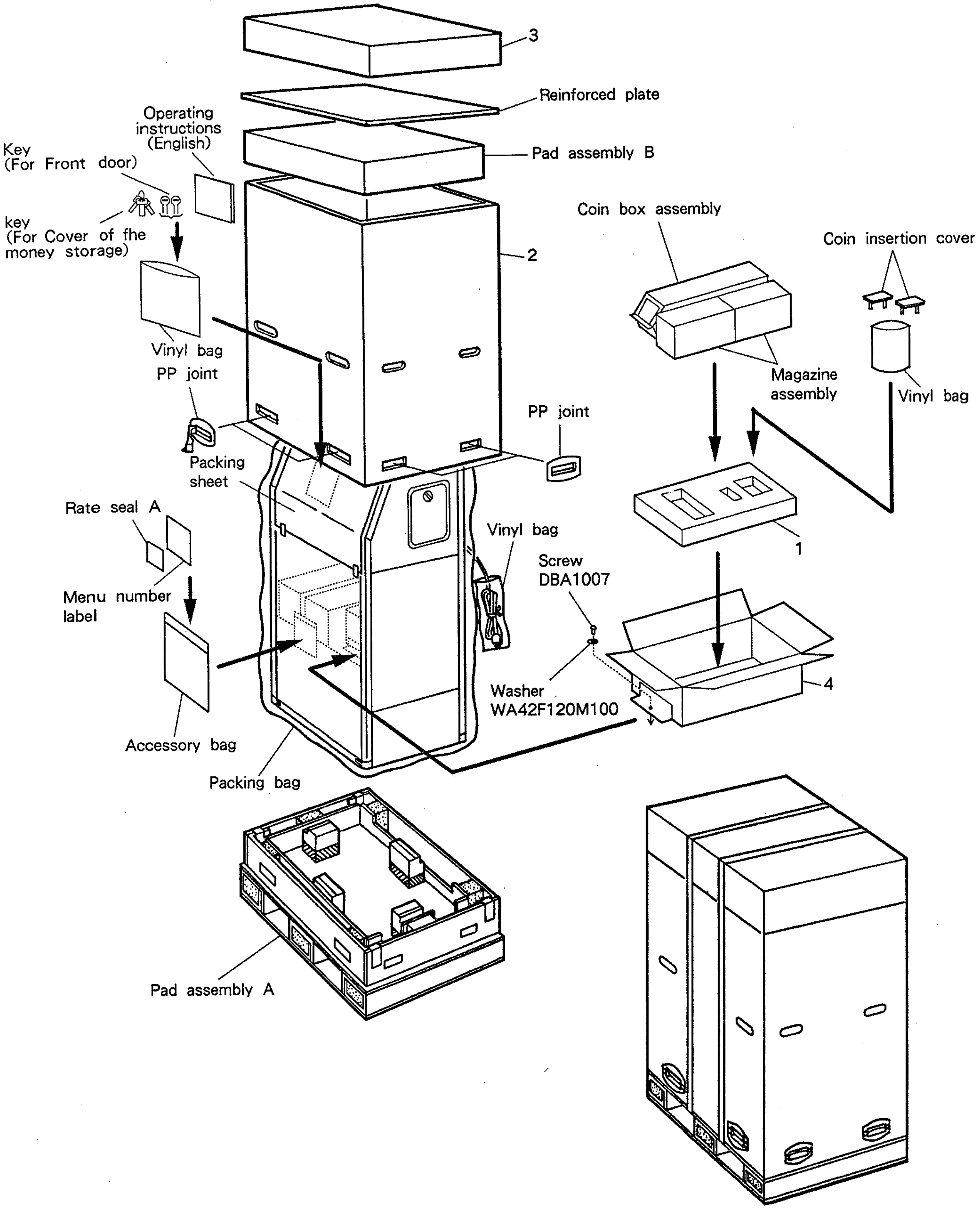
• COIN ACCEPTOR



• BILL ACCEPTOR


BBZ30P060FMC
DBA1007
WA42F120M100
AMZ40P080FMC
Bill holder (F)
6

• PACKING


3
Reinforced plate
Operating instructions (English)
Pad assembly B
Key (For Front door)
key (For Cover of fhe money storage)
Coin box assembly
2
Coin insertion cover
Vinyl bag
PP joint
Magazine assembly
Vinyl bag
PP joint
Packing sheet
Rate seal A
Vinyl bag
1
Screw DBA1007
Menu number label
4
Washer WA42F120M100
Accessory bag
Packing bag
Pad assembly A

3076

PIONEER®
The future of sound and vision.

Service Manual

(1)
ORDER NO.
ARP1912

COMPACT DISC JUKEBOX

CJ-V55

- Refer to the service manual ARP1913, CJ-V55.

- This manual is applicable to the KUC type.

CONTENTS

1. SAFETY INFORMATION 2
2. PARTS LOCATIONS 3
3. DISASSEMBLY 10
4. P.C. BOARDS NAME 13
5. SERVICE MODE 14

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© PIONEER ELECTRONIC CORPORATION 1990

3076

IFI JAN. 1990 Printed in Japan

1. SAFETY INFORMATION

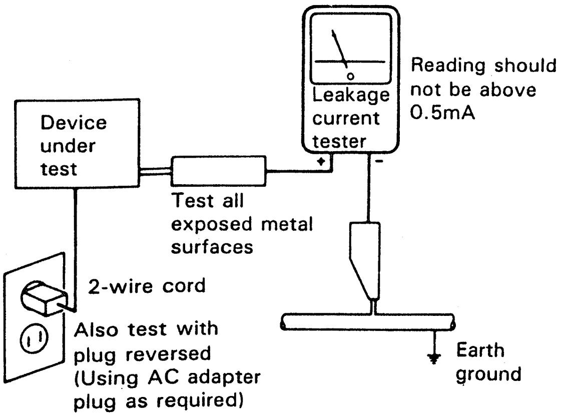
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Leakage current tester
Reading should not be above 0.5mA
Device under test
+
-
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

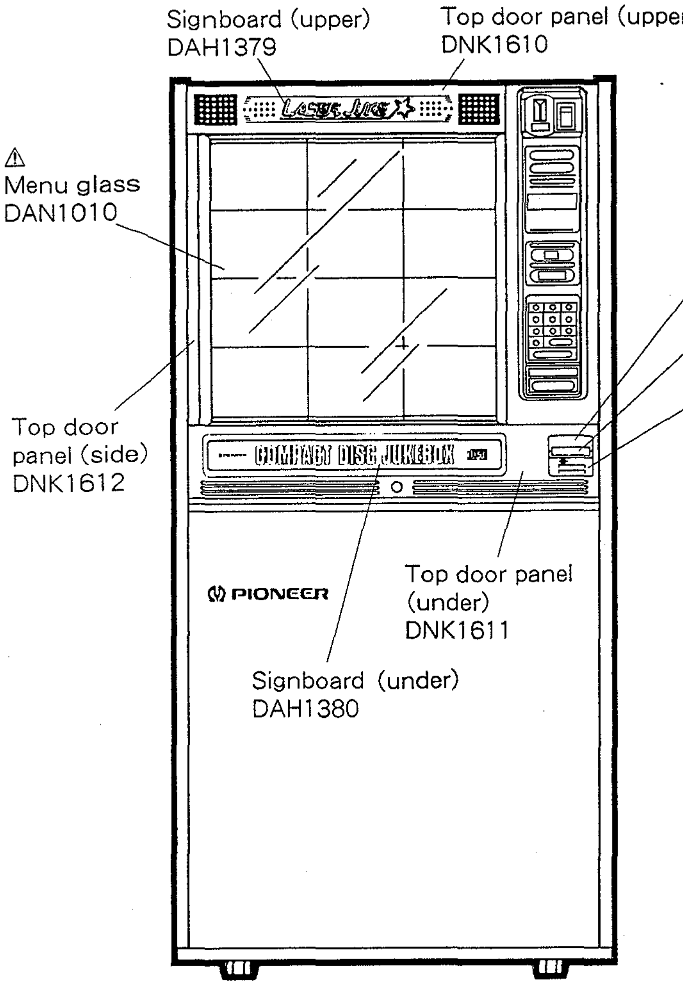
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

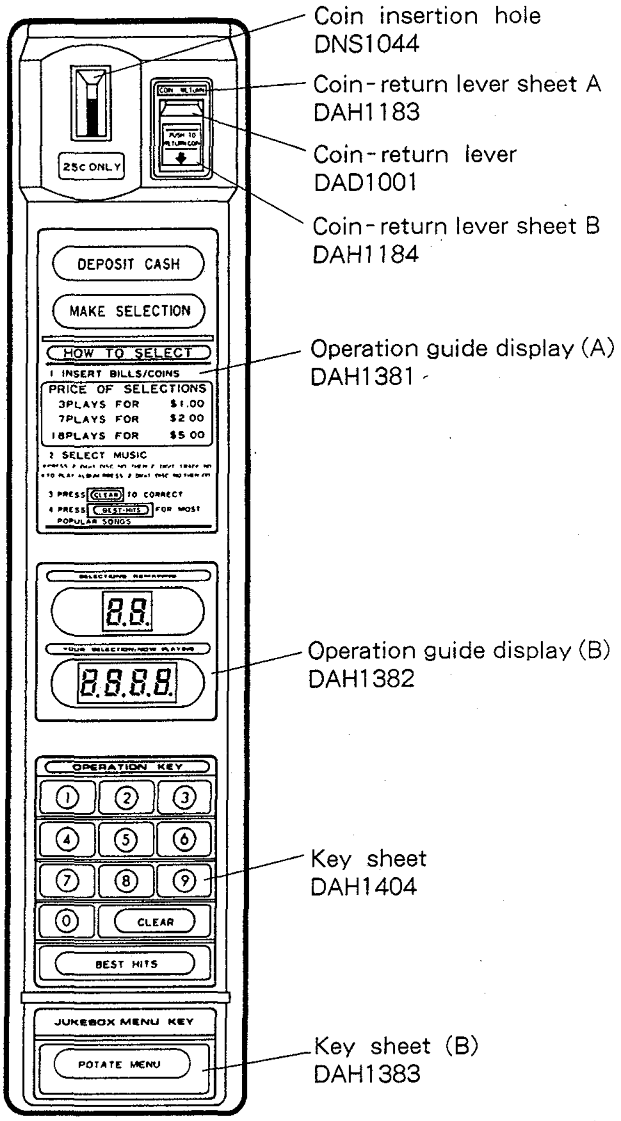
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. PARTS LOCATIONS

2.1 EXTERIOR

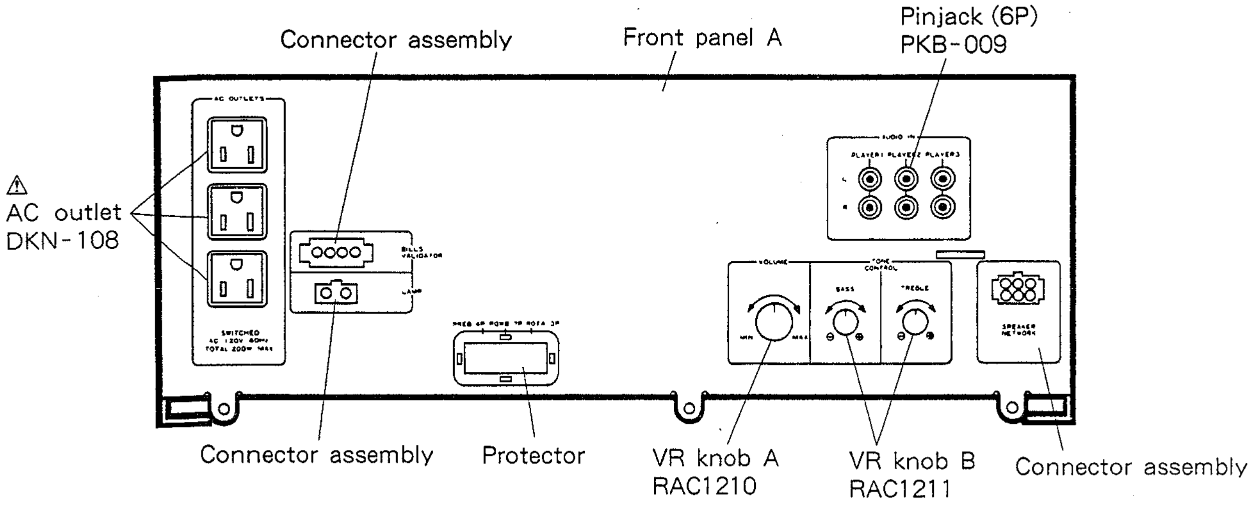

Signboard (upper)
DAH1379
Top door panel (upper)
DNK1610
⚠
Menu glass
DAN1010
LASER JUKE
Bill insertion hole panel
DNK1613
Bill insertion hole
DNS1084
Bill sheet
DAH1393
Top door
panel (side)
DNK1612
COMPACT DISC JUKEBOX
PIONEER
Top door panel
(under)
DNK1611
Signboard (under)
DAH1380

●OPERATION SECTION

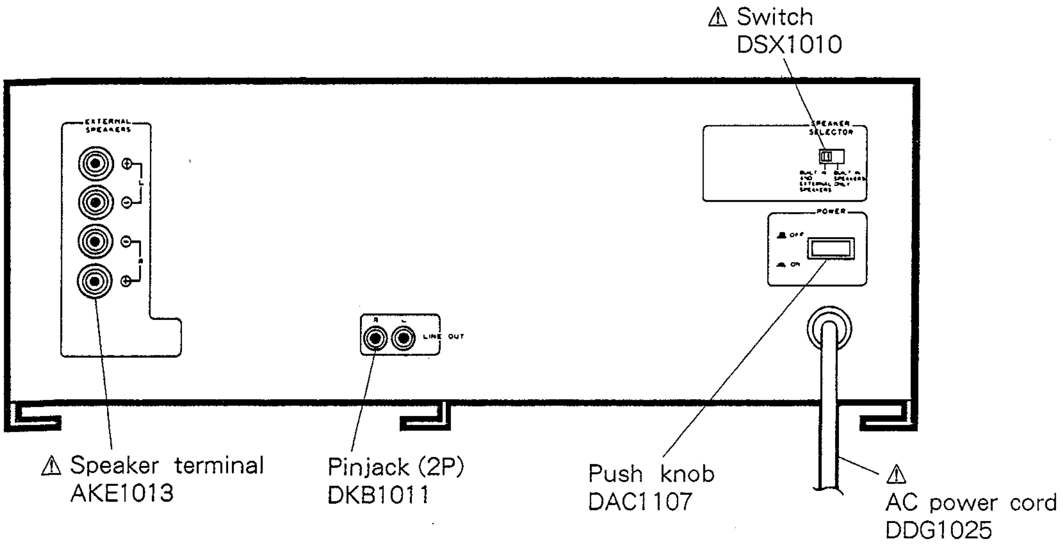

Coin insertion hole
DNS1044
Coin-return lever sheet A
DAH1183
Coin-return lever
DAD1001
Coin-return lever sheet B
DAH1184
25¢ ONLY
COIN RETURN
PUSH TO RETURN COIN
DEPOSIT CASH
MAKE SELECTION
HOW TO SELECT
1 INSERT BILLS/COINS
PRICE OF SELECTIONS
3PLAYS FOR $1.00
7PLAYS FOR $2.00
18PLAYS FOR $5.00
2 SELECT MUSIC
3 PRESS CLEAR TO CORRECT
4 PRESS BEST-HITS FOR MOST POPULAR SONGS
Operation guide display (A)
DAH1381
SELECTIONS REMAINING
8.8.
YOUR SELECTION/NOW PLAYING
8.8.8.8.
Operation guide display (B)
DAH1382
OPERATION KEY
1
2
3
4
5
6
7
8
9
0
CLEAR
BEST HITS
Key sheet
DAH1404
JUKEBOX MENU KEY
ROTATE MENU
Key sheet (B)
DAH1383

2.2 AMP SECTION

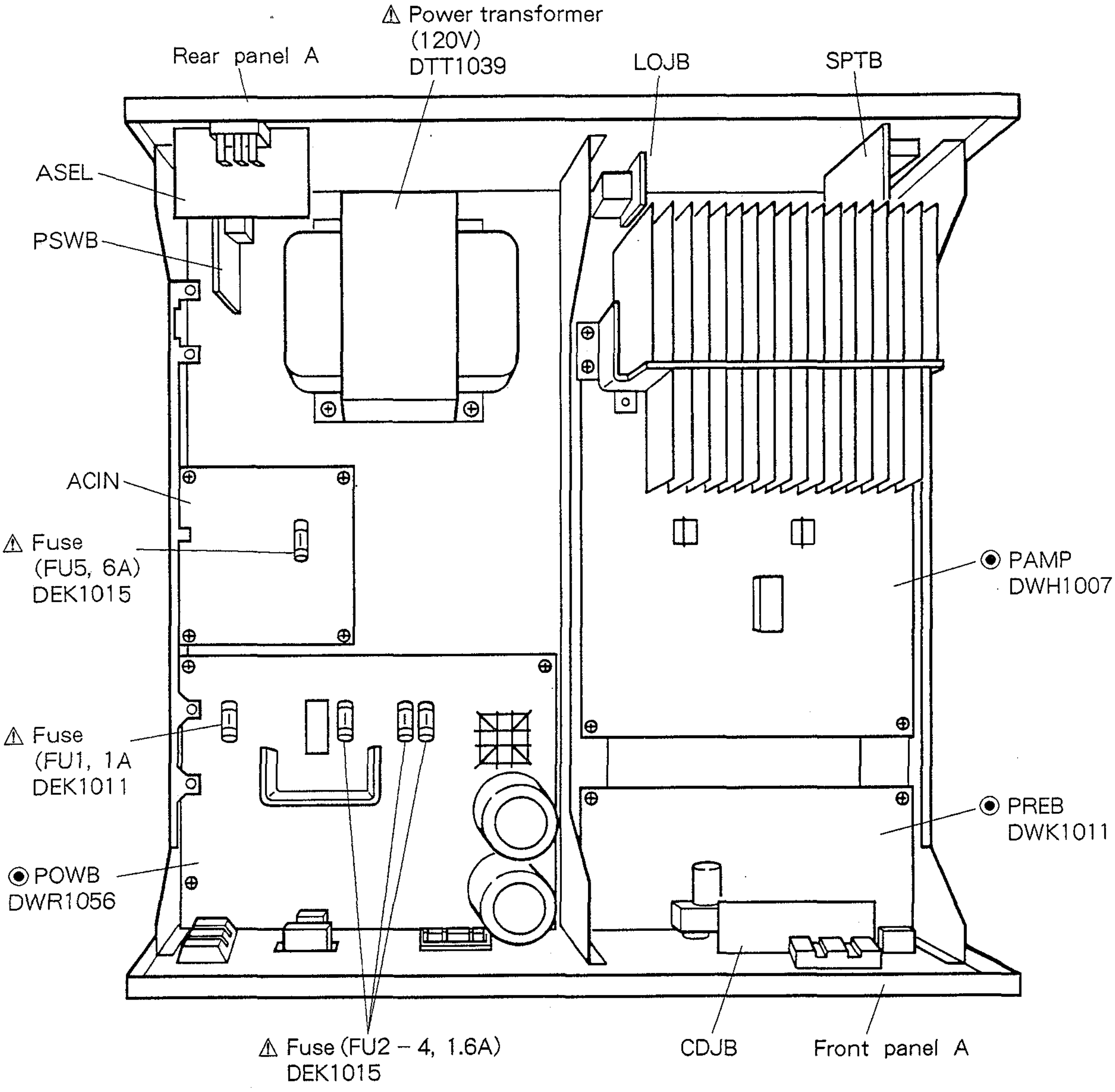
● FRONT VIEW


Connector assembly
Front panel A
Pinjack (6P)
PKB-009
⚠
AC outlet
DKN-108
Connector assembly
Protector
VR knob A
RAC1210
VR knob B
RAC1211
Connector assembly

● REAR VIEW

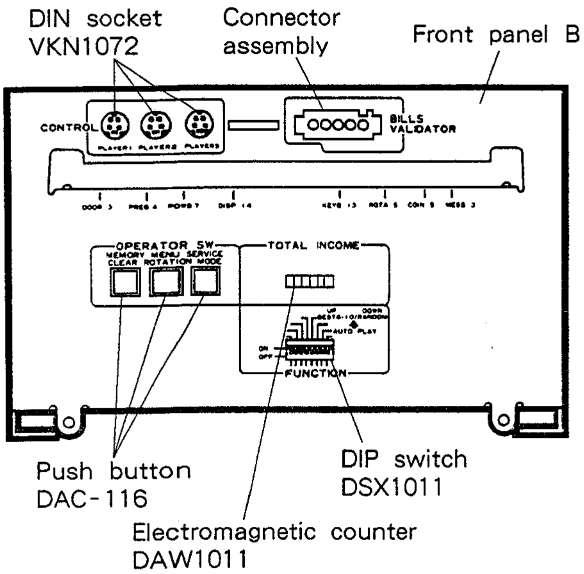

⚠ Switch
DSX1010
⚠ Speaker terminal
AKE1013
Pinjack (2P)
DKB1011
Push knob
DAC1107
⚠
AC power cord
DDG1025

● TOP VIEW

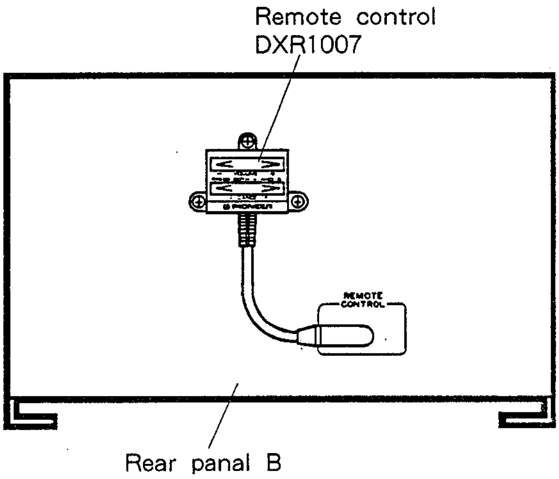

⚠ Power transformer
(120V)
DTT1039
Rear panel A
LOJB
SPTB
ASEL
PSWB
ACIN
⚠ Fuse
(FU5, 6A)
DEK1015
◉ PAMP
DWH1007
⚠ Fuse
(FU1, 1A
DEK1011
◉ PREB
DWK1011
◉ POWB
DWR1056
⚠ Fuse (FU2 – 4, 1.6A)
DEK1015
CDJB
Front panel A

2.3 COMMANDER SECTION

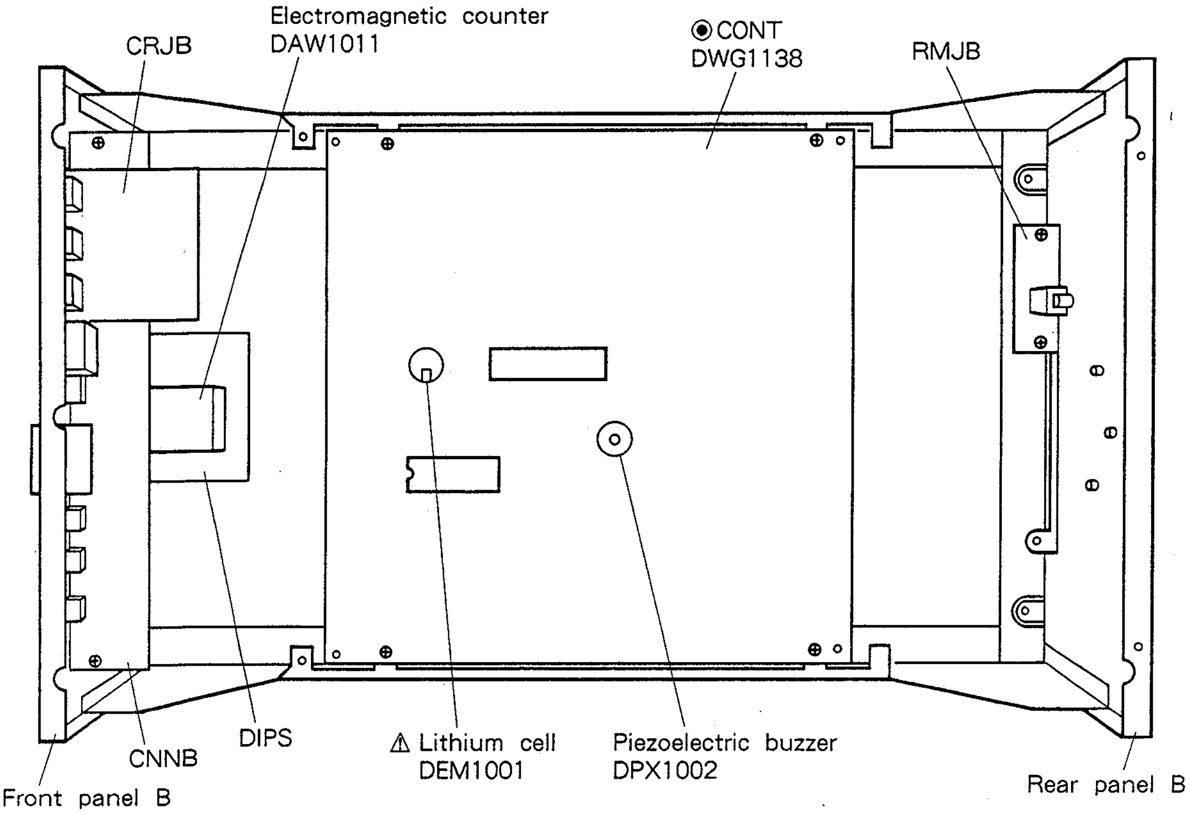
- **FRONT VIEW**


DIN socket
VKN1072
Connector
assembly
Front panel B
CONTROL
PLAYER1
PLAYER2
PLAYER3
BILLS
VALIDATOR
OPERATOR SW
MEMORY CLEAR
MENU ROTATION
SERVICE MODE
TOTAL INCOME
AUTO PLAY
ON
OFF
FUNCTION
Push button
DAC-116
DIP switch
DSX1011
Electromagnetic counter
DAW1011

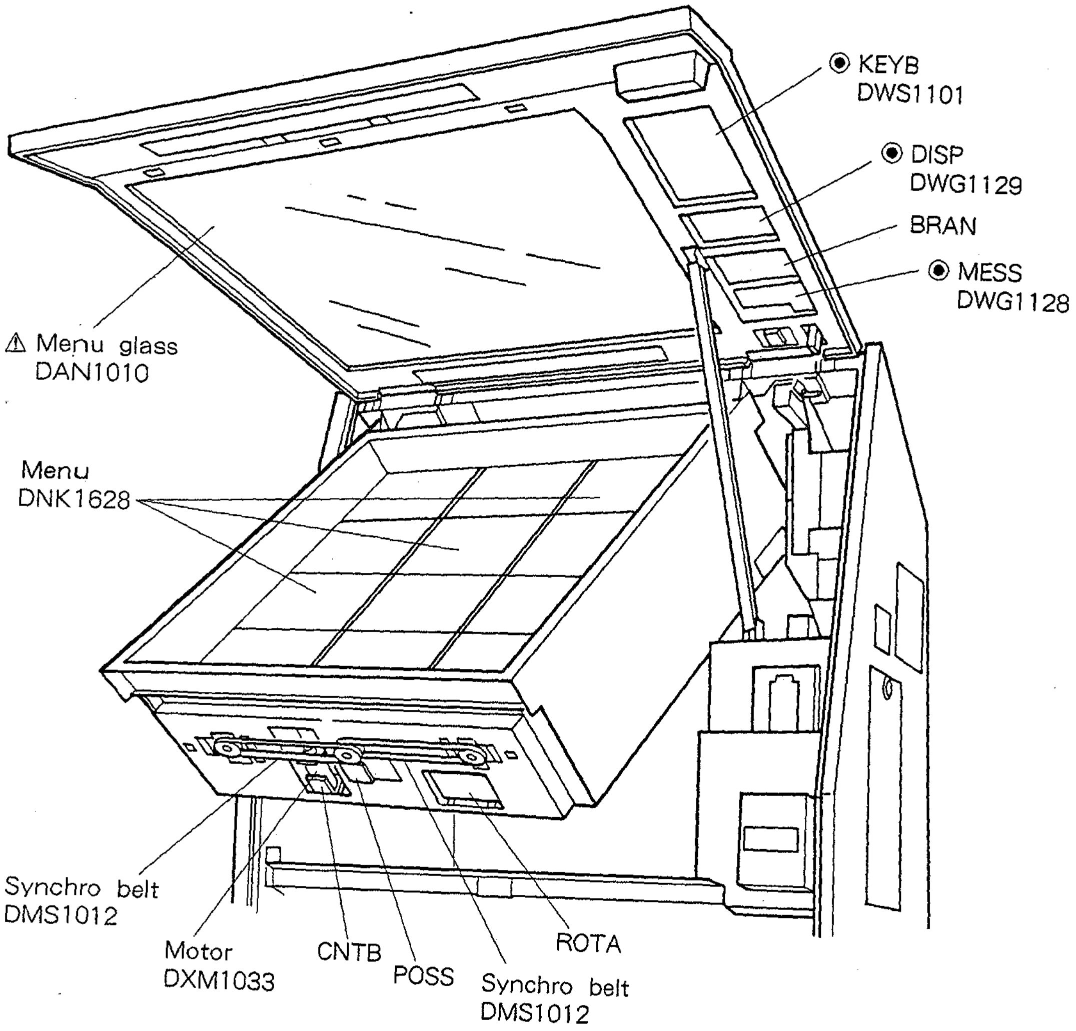
- **REAR VIEW**


Remote control
DXR1007
REMOTE
CONTROL
Rear panal B

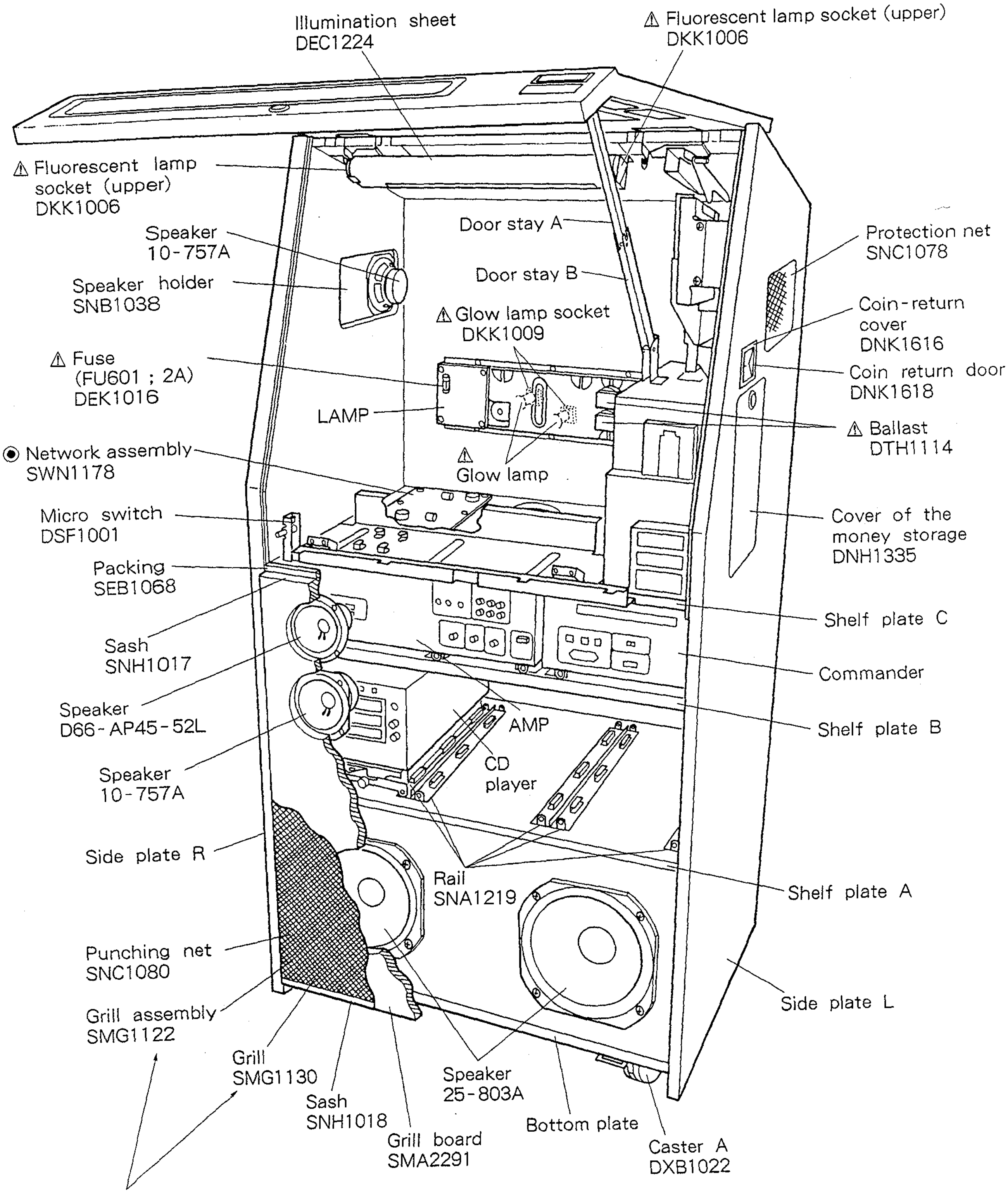
- **TOP VIEW**


CRJB
Electromagnetic counter
DAW1011
◉CONT
DWG1138
RMJB
DIPS
CNNB
Front panel B
⚠ Lithium cell
DEM1001
Piezoelectric buzzer
DPX1002
Rear panel B

2.4 REMOVING CONDITION OF THE UNDER LAMP ASSEMBLY

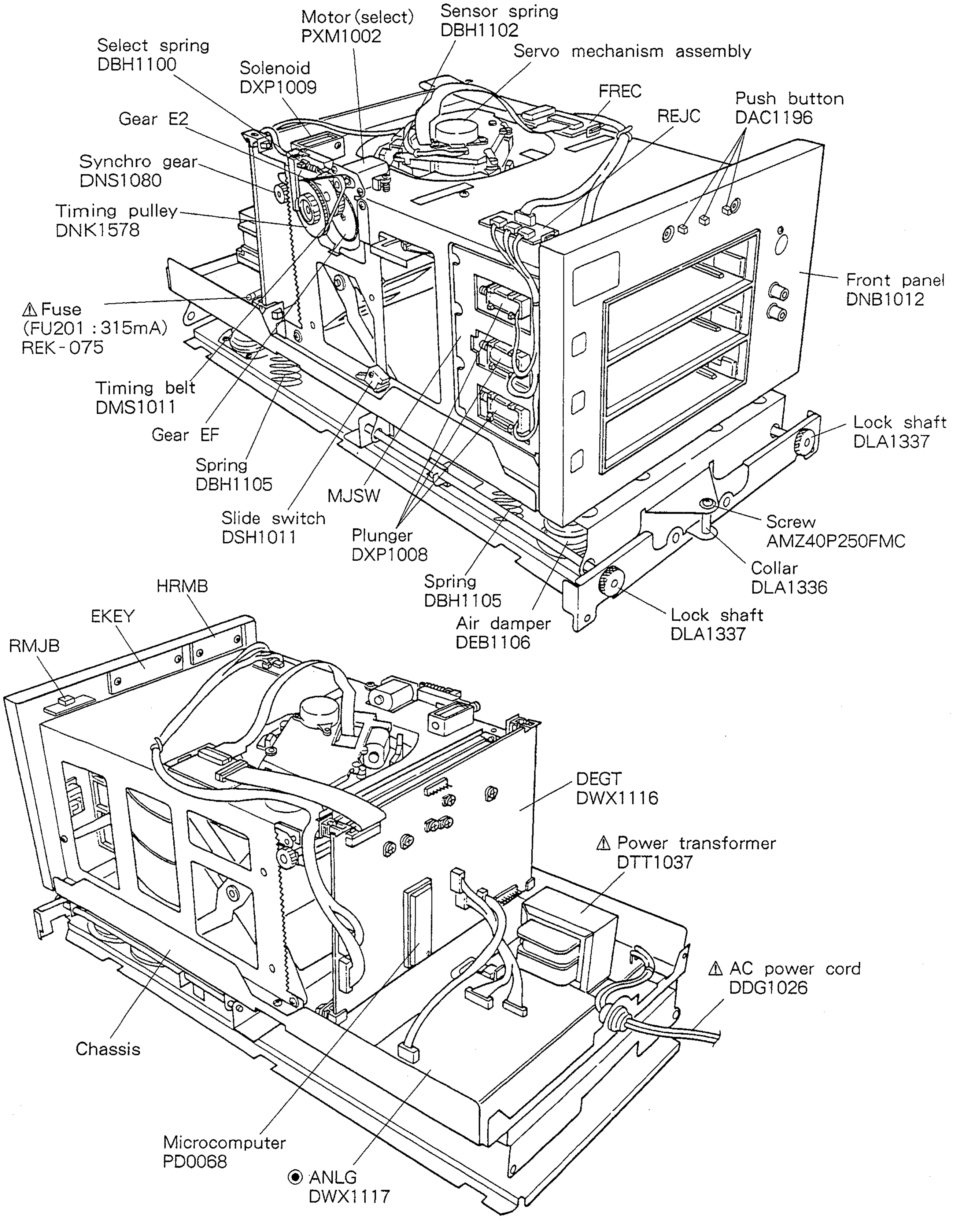

◉ KEYB
DWS1101
◉ DISP
DWG1129
BRAN
◉ MESS
DWG1128
⚠ Menu glass
DAN1010
Menu
DNK1628
Synchro belt
DMS1012
Motor
DXM1033
CNTB
POSS
Synchro belt
DMS1012
ROTA

2.5 REMOVING CONDITION OF THE MENU BOARD


Illumination sheet
DEC1224
⚠ Fluorescent lamp socket (upper)
DKK1006
⚠ Fluorescent lamp socket (upper)
DKK1006
Speaker
10-757A
Speaker holder
SNB1038
Door stay A
Door stay B
⚠ Glow lamp socket
DKK1009
Protection net
SNC1078
Coin-return cover
DNK1616
Coin return door
DNK1618
⚠ Fuse
(FU601 ; 2A)
DEK1016
LAMP
⚠ Ballast
DTH1114
◉ Network assembly
SWN1178
⚠
Glow lamp
Micro switch
DSF1001
Cover of the money storage
DNH1335
Packing
SEB1068
Shelf plate C
Sash
SNH1017
Commander
Speaker
D66-AP45-52L
AMP
Shelf plate B
Speaker
10-757A
CD player
Side plate R
Rail
SNA1219
Shelf plate A
Punching net
SNC1080
Grill assembly
SMG1122
Side plate L
Grill
SMG1130
Sash
SNH1018
Speaker
25-803A
Bottom plate
Grill board
SMA2291
Caster A
DXB1022

Note : As to the construction of these parts,
refer to the exploded view.

2.6 CD PLAYER SECTION


Select spring
DBH1100
Motor (select)
PXM1002
Sensor spring
DBH1102
Servo mechanism assembly
Solenoid
DXP1009
FREC
REJC
Push button
DAC1196
Gear E2
Synchro gear
DNS1080
Timing pulley
DNK1578
Front panel
DNB1012
⚠ Fuse
(FU201 : 315mA)
REK-075
Timing belt
DMS1011
Gear EF
Lock shaft
DLA1337
Spring
DBH1105
MJSW
Slide switch
DSH1011
Plunger
DXP1008
Screw
AMZ40P250FMC
Collar
DLA1336
Spring
DBH1105
Air damper
DEB1106
Lock shaft
DLA1337
HRMB
EKEY
RMJB
DEGT
DWX1116
⚠ Power transformer
DTT1037
⚠ AC power cord
DDG1026
Chassis
Microcomputer
PD0068
◉ ANLG
DWX1117

3. DISASSEMBLY

3.1 REMOVING THE TOP DOOR ASSEMBLY

1. Open the menu door, and remove six screws ① and two R pins to remove the menu board assembly.

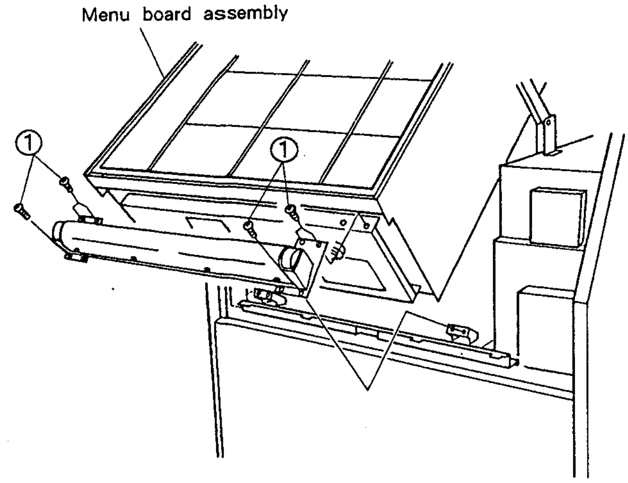

Menu board assembly
①
①

Fig. 3-1

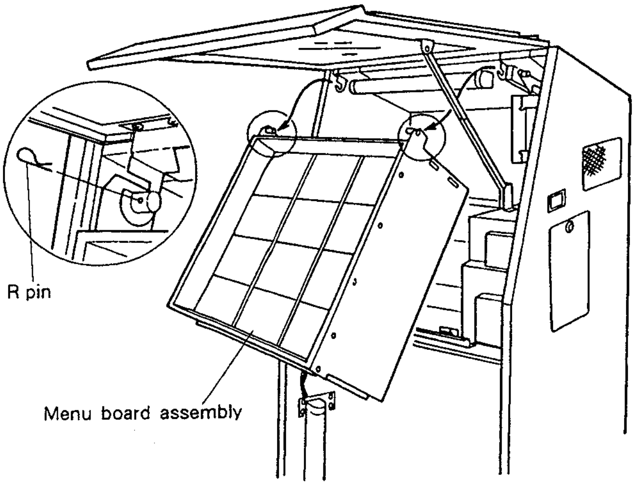

R pin
Menu board assembly

Fig. 3-2

2. Loosen four screws ② and remove two screws ③ to remove the upper lamp assembly.
3. Remove two screws ④ to remove the CA holder (B) assembly.

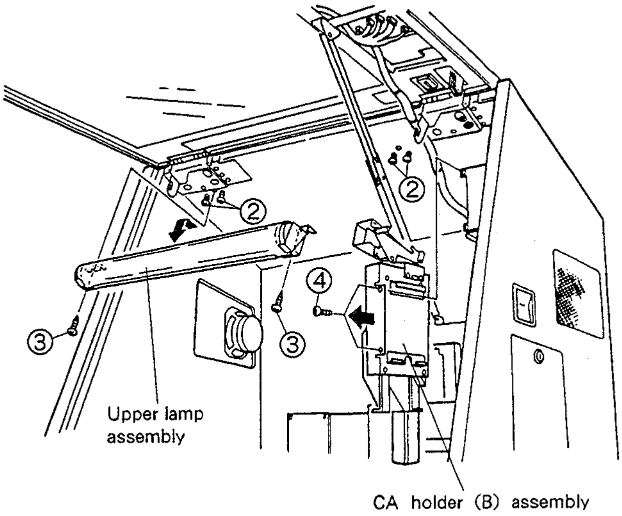

②
②
④
③
③
Upper lamp assembly
CA holder (B) assembly

Fig. 3-3

4. Remove six screws ⑤, two screws ⑥ and two screws ⑦ to remove the top door assembly.

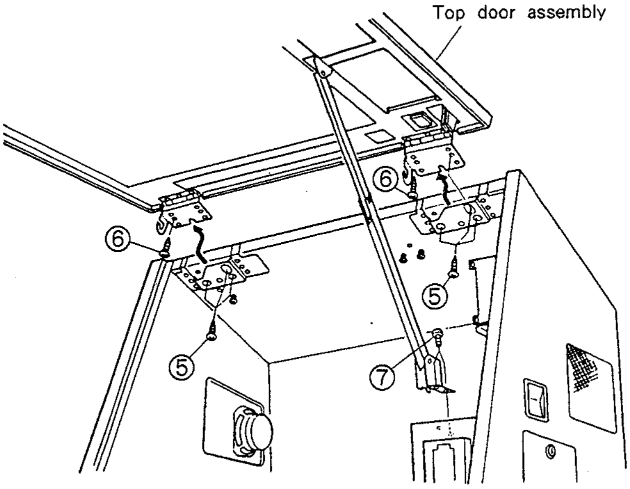

Top door assembly
⑥
⑥
⑤
⑤
⑦

Fig. 3-4

3.2 REMOVING THE MENU MOTOR ASSEMBLY

1. Remove two screws ① to remove the menu motor assembly.

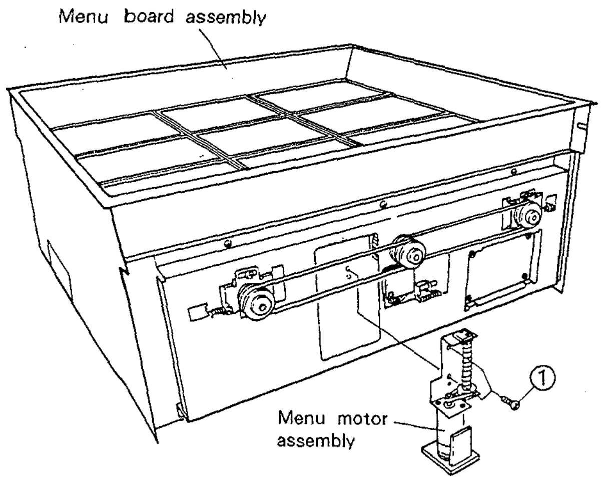

Menu board assembly
①
Menu motor assembly

Fig. 3-5

3.3 REMOVING THE SYNCHRO BELT

1. Loosen two screws ① and remove two springs with plier, and remove two synchro belts by pushing the synchro pulley in the direction of arrow.

Note : When the synchro belt is replaced, be sure to perform the three sides of the menu synchronous adjustment.

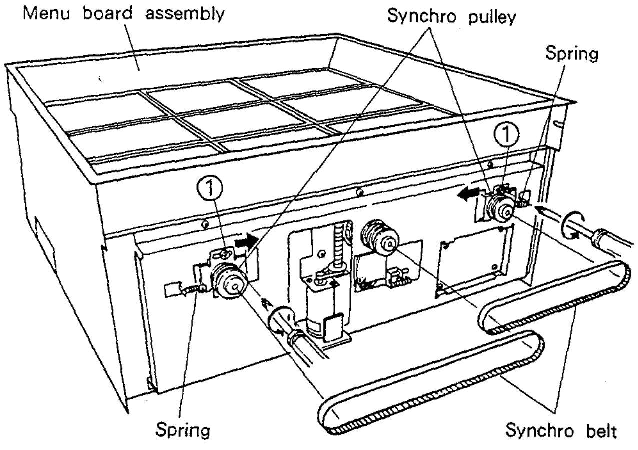

Menu board assembly
Synchro pulley
Spring
①
①
Spring
Synchro belt

Fig. 3-6

3.4 REMOVING THE LAMP AND NETWORK ASSEMBLY

1. Remove six screws ① to remove the network assembly.
2. Remove four screws ② to remove the LAMP.

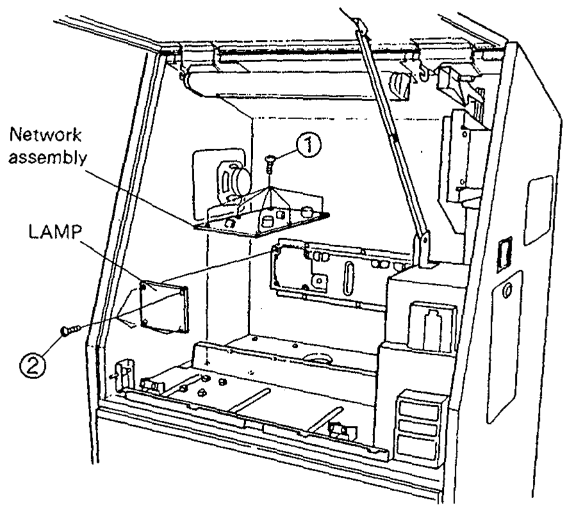

Network assembly
①
LAMP
②

Fig. 3-7

3.5 REMOVING THE ROTA AND POSS

1. Remove four screws ① to remove the ROTA.
2. Remove a screw ② to remove the POSS.

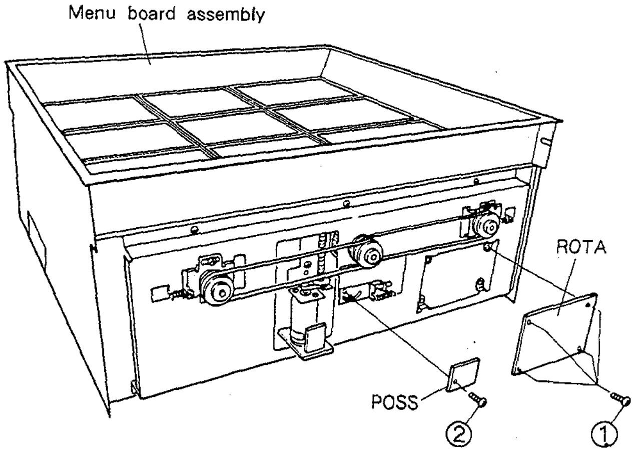

Menu board assembly
ROTA
POSS
②
①

Fig. 3-8

3.6 REMOVING THE MESS, BRAN, DISP AND KEYB

1. Remove four screws ① to remove the MESS.
2. Remove four screws ② to remove the BRAN.
3. Remove four screws ③ to remove the DISP.
4. Remove eight screws ④ to remove the KEYB.

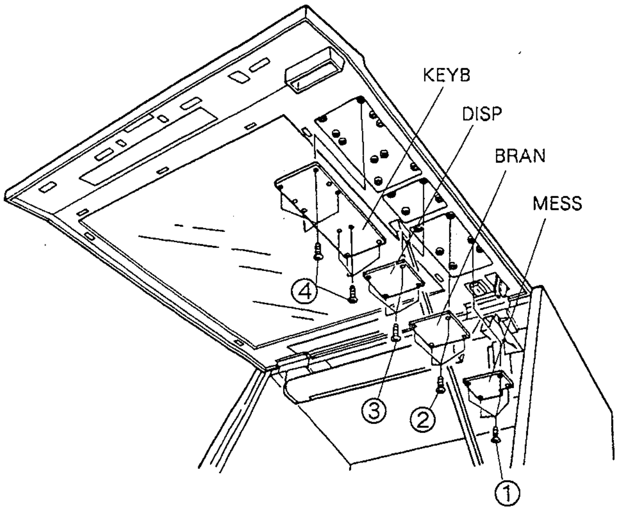

KEYB
DISP
BRAN
MESS
④
③
②
①

Fig. 3-9

3.7 REMOVING THE AMP, COMMANDER AND CD PLAYER

1. Remove three screws ① to remove the AMP.
2. Remove two screws ② to remove the commander.
3. Remove two screws ③ to remove the CD player.

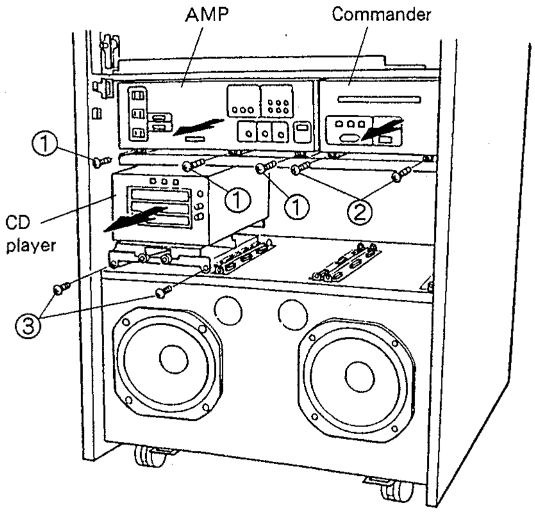

AMP
Commander
①
①
①
②
CD player
③

Fig. 3-10

3.8 REMOVING THE SPEAKER (WOOFER)

1. Remove four screws ① and disconnect the connector of speaker cord to remove the speaker.

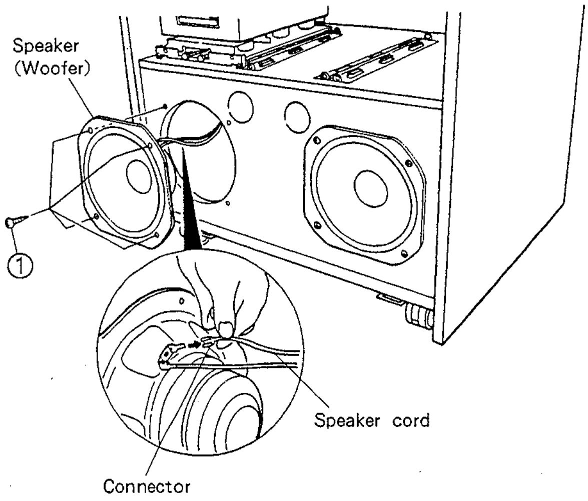

Speaker (Woofer)
①
Speaker cord
Connector

Fig. 3-11

3.9 REMOVING THE GLASS

1. Remove the top door assembly. (Refer to section 3.1.)
2. Set the glass side of top door assembly to the downward. Remove thirty-seven screws ① to remove the top door base, then remove the glass.

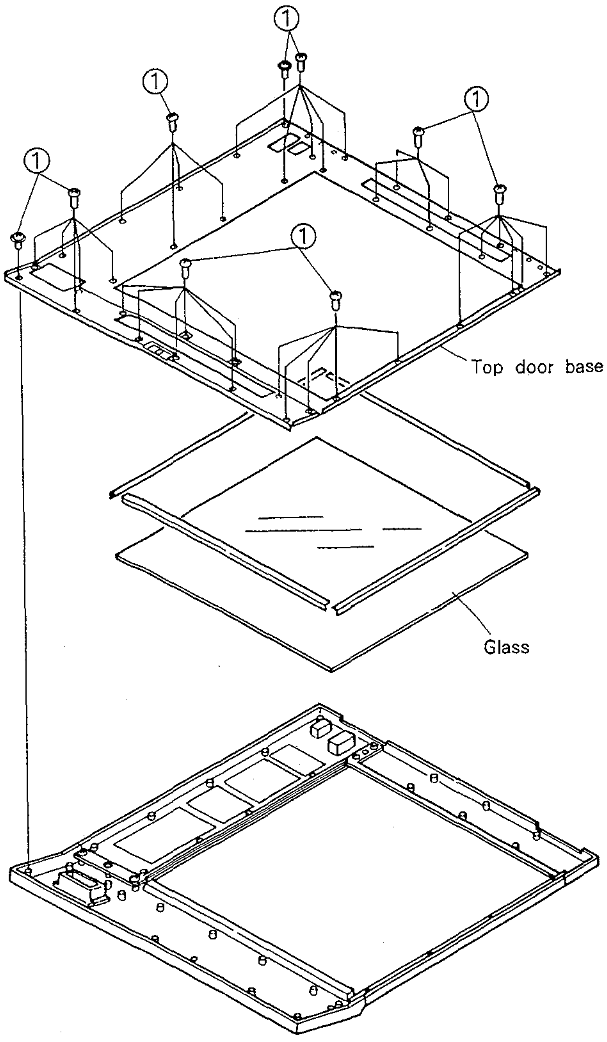


Fig. 3-12

3.10 REMOVING THE GLOW LAMP

Refer to the operating instructions (page 20).

4. P. C. BOARDS NAME

MAIN SECTION

MESS······MESSAGE
DISP·······DISPLAY
KEYB······KEYBOARD
BRAN······BRANCH
ROTA······ROTATION
POSS······POSITION SENSOR
LAMP······LAMP
CNTB······COUNTER BOARD
PAMP······POWER AMPLIFIER
SPTB·······SPEAKER TERMINAL BOARD
LOJB······LINE OUT JACK BOARD
PREB·······PRE AMPLIFIER BOARD
POWB·····POWER BOARD
ACIN·······AC INPUT BOARD
ASEL·······AMPLIFIER VOLTAGE SELECTOR BOARD
PSWB······POWER SWITCH BOARD
CDJB······CD JACK BOARD
CONT······CONTROL
OPER······OPERATION
DIPS·······DIP SWITCH
CRJB······CD REMOTE JACK BOARD
RMJB······REMOTE CONTROL JACK BOARD
CNNB······CONNECTION BOARD

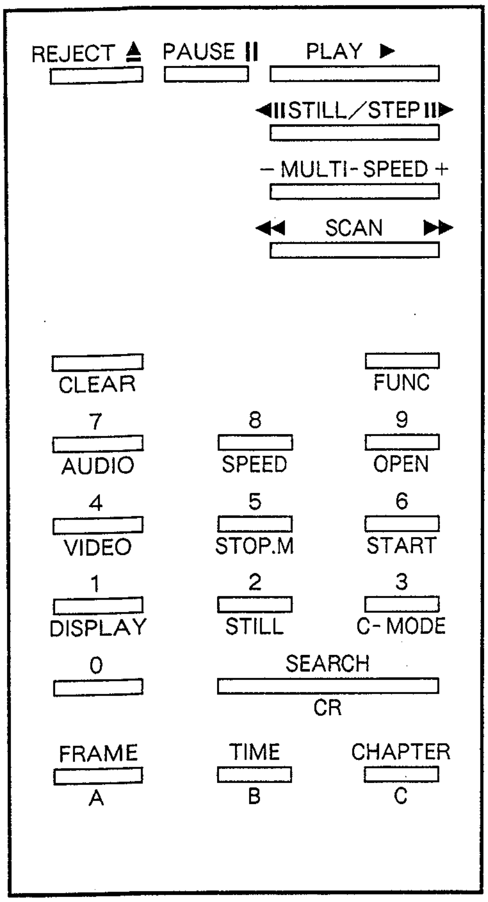
CD PLAYER SECTION

EKEY······EJECT KEY
DEGT······DIGITAL DECOADING UNIT
ANLG······ANALOG UNIT
DJAK······DIGITAL JACK
PJAK······PIN JACK
MJSW·····MAGAZINE EJECT SWITCH
SENS······SENSOR
REJC·······REJECT
FREC·······FLEXIBLE READER CONNECTOR
HRMB·····HOUR METER BOARD
RMJB······REMOTE JACK BOARD

5. SERVICE MODE

- As to using the service mode, refer to the operating instructions (pages 23 – 26). And also as to the cord table of the service mode, refer to the operating instructions (pages 20 – 22).
- Shows the function table of the remote control (RU-V101) for service as follows. When operating the CD changer section directly, it is able to operate as shown in the below by connect the wired-remote control to the CD chager.

5.1 FUNCTION TABLE OF THE REMOTE CONTROL FOR SERVICE


REJECT ▲
PAUSE II
PLAY ▶
◀II STILL/STEP II▶
– MULTI-SPEED +
◀◀ SCAN ▶▶
CLEAR
FUNC
7
AUDIO
8
SPEED
9
OPEN
4
VIDEO
5
STOP.M
6
START
1
DISPLAY
2
STILL
3
C-MODE
0
SEARCH
CR
FRAME
A
TIME
B
CHAPTER
C

＊1	REJECT		: Spinde stop
＊1	PAUSE		: Pause
＊1	PLAY		: Play
＊2	STILL/STEP II▶		: Disc select
＊2	STILL/STEP ◀II		: Disc return
＊2	MULTI-SPEED +		: Test command
＊2	MULTI-SPEED –		: Test command
＊1	SCAN ▶▶		: Scan fwd
＊1	SCAN ◀◀		: Scan rev
＊1	CLEAR		: Clear
＊2	FRAME		: Frame set
＊2	TIME		: Time set
＊2	CHAPTER		: Track set
＊1	SEARCH		: Search
＊1	10key		: Numerical input
	DISPLAY	(FUNC + 1)	: no entry
	STILL	(FUNC + 2)	: no entry
	C-MODE	(FUNC + 3)	: no entry
	VIDEO	(FUNC + 4)	: no entry
＊1	STOP.M	(FUNC + 5)	: Stop marker
＊1	START	(FUNC + 6)	: Start
	AUDIO	(FUNC + 7)	: no entry
	SPEED	(FUNC + 8)	: no entry
＊1	OPEN	(FUNC + 9)	: Magazine eject

＊1 ··················Normal function command
＊2 ··················Function command is different from the LD-V530.
Not marked ······No entry command

- **Test command**

0 + MULTI-SPEED (+, –) keys : LD-ON
1 + MULTI-SPEED (+, –) keys : FOUS IN
2 + MULTI-SPEED (+, –) keys : Spindle kick
3 + MULTI-SPEED (+, –) keys : Tracking and slider servo ON
4 + MULTI-SPEED (+, –) keys : Slider fwd (500ms) ⎤ Stop by MULTI-SPEED (+, –) key
5 + MULTI-SPEED (+, –) keys : Slider rev (500ms) ⎦
6 + MULTI-SPEED (+, –) keys : Tracking and slider servo OFF
7 + MULTI-SPEED (+, –) keys : Slider stop and spindle stop
8 + MULTI-SPEED (+, –) keys : Slider stop and spindle stop
9 + MULTI-SPEED (+, –) keys : LD-OFF

Operating Instructions

COMPACT DISC JUKEBOX
CJ-V55

LASER JUKE

COMPACT
disc
DIGITAL AUDIO

Thank you for buying this PIONEER product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference. In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

IMPORTANT NOTICE
RECORD THE MODEL NUMBER AND SERIAL NUMBER OF THIS EQUIPMENT BELOW. THE NUMBERS ARE ON THE REAR PANEL.

MODEL NO. CJ-V55

SERIAL NO. ____________________

KEEP THESE NUMBERS FOR FUTURE USE.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

[For Canadian models]
CAUTION:
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION:
POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

CONTENTS

CAUTIONS ON INSTALLATION 4
CARE OF DISCS 4

PREPARATION

HOW TO OPEN THE MENU DOOR 5
HOW TO OPEN THE MAIN UNIT DOOR 5
REMOVING THE TRANSPORT SCREWS FROM THE CD PLAYER 6
CONNECTION 6
ATTACHING THE COIN ACCEPTOR 8
ATTACHING THE BILL ACCEPTOR 8
INSTALLING THE LOCK ON THE CHARGE STORAGE COVER 10
INSTALLING DISCS TO THE MAGAZINE 10
ATTACHING THE MENU SHEET 12
INSTALLING THE LOCK TO THE MENU DOOR 12
CASTER LOCKING 13
SETTING OF THE FUNCTION SWITCHES 13

NAME AND FUNCTION OF EACH PART 14
OPERATION 17

REPLACING THE MENU AND DISC 18
ADDING A CD PLAYER 18
REMOVING COINS/BILLS 19

MAINTENANCE

CHANGING THE FLUORESCENT LAMPS 19
CHANGING THE GLOW LAMP 20

SERVICE MODE

HOW TO USE SERVICE MODE 20
ERROR CODE 26

TROUBLESHOOTING 27
SPECIFICATIONS 28

PIONEER®
The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

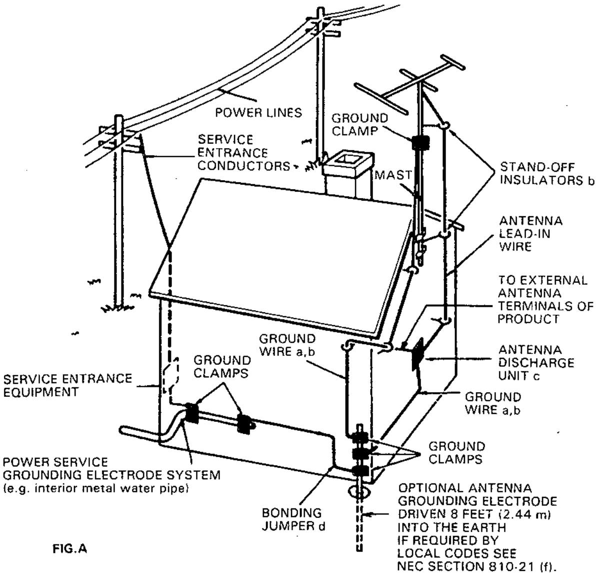

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
ANTENNA DISCHARGE UNIT c
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
BONDING JUMPER d
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).

FIG.A

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

a) Use No.10 AWG (5.3 mm²) copper, No.8 AWG (8.4 mm²) aluminum, No.17 AWG (1.0 mm²) copper-clad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

CAUTION: USE OF CONTROL OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

USE OF OPTICAL INSTRUMENTS WITH THIS PRODUCT WILL INCREASE EYE HAZARDS.

[For Canadian model]

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

[Pour le modèle Canadien]

L'interférence, radioélectrique générée par cet appareil numérique de type B ne dépasse pas les limites énoncées dans le Règlement sur les perturbations radioélectriques, section appareil numérique, du Ministère des Communications.

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

CAUTIONS ON INSTALLATION

Select a horizontal and stable place. Avoid the following:

① Exposed to direct sunlight
② Installation near a toilet or kitchen
③ Exposed to a spotlight
④ Installation near a refrigerator, dimmer, air-conditioning equipment or other large electrical appliances
⑤ Installation near neon signs
⑥ Installation on a non-horizontal place with a weak floor
Where the floor is not horizontal, insert a hard plate or something similar beneath the casters.
⑦ Installation in a place where it is difficult to carry out coin/bill collection, servicing or maintenance.

Condensation

In winter, if this system is brought from outdoors into a heated room or the temperature of the room where this system is installed is raised quickly, the operation unit or lens will be covered by condensation.
When covered by condensation, this system cannot read and play laser beam signals.
Keep this system at room temperature for one to two hours depending on the degree of condensation and the condensation will evaporate, making this system ready for playing.
Other symptoms similar to condensation may also occur at places exposed directly to a cooler or air-conditioner in summer. In such a case, move this system to another location.

Special cautions on setting

① **Power capacity**
Supply power from a wall outlet that allows a safe supply of power equal to or more than the total power consumption of all equipment you will use.
② **Connection cord**
Prevent the weight or tensile force of the cord from being applied to the plug of the connection cord.
③ **Grounding**
Where no earth leakage breaker is available, connect the grounding conductor to the earth.
④ **Confirmation after setting**
Be sure to confirm the following:
- Casters are locked.
- The menu sheet matches the discs.
- The external speaker phase is properly set and the right and left speakers are positioned properly.

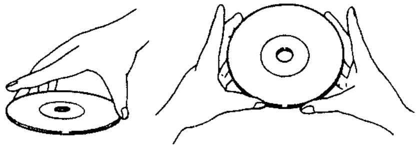
Our company will not be responsible for any accident or other damage due to an improper fixing condition, fixing with insufficient strength, accident, or other similar circumstances.

CARE OF DISCS

- With this unit, use discs which display the mark shown below.

COMPACT
disc
DIGITAL AUDIO

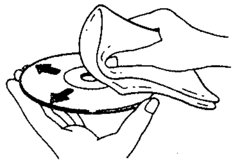
- When holding discs, do not touch their signal surfaces. Hold the edges, or one edge and the center hole.



- Do not affix labels or adhesive tape to the label surfaces. Also, do not scratch or damage the label.
- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.

CLEANING DISCS

- The presence of fingerprints or smudges on the surface of the disc will not directly affect the recorded signals; but depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality.
Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer perimeter.



- If a disc becomes very dirty, wet a soft cloth in water. After wringing it out well, wipe the dirt away gently, and then remove any water drops with another soft dry cloth.
- Do not use record cleaning sprays of anti-static agents on discs. Also, never clean discs with benzene, thinner, or other volatile solvents which may cause damage to the disc surface.

STORING DISCS

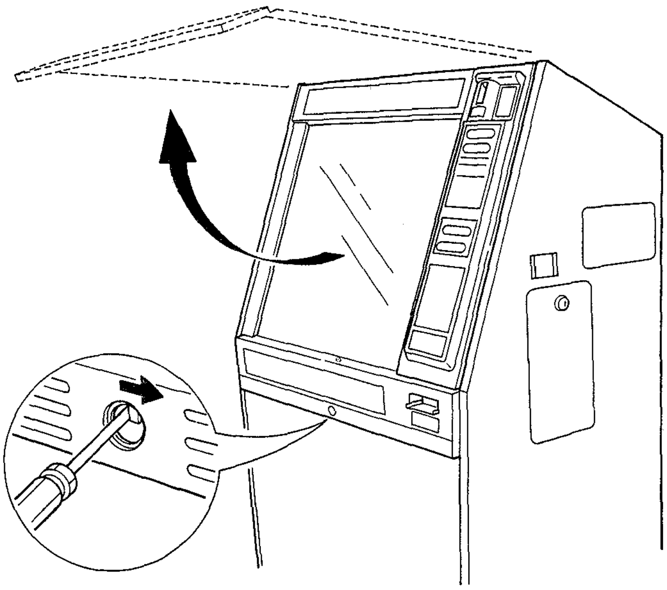
(Storing without using the six-disc magazine)

- Discs are made of the same kinds of plastic used for conventional analog audio records. Be careful not to allow discs to warp; always store discs in their cases vertically, avoiding locations with heat or humidity, or extremely low temperatures. Avoid leaving discs in cars and on the seats being exposed to direct sunlight. This can be harmful to your discs.
- Always read and abide by the precautionary notes listed on the disc labels.

PREPARATION

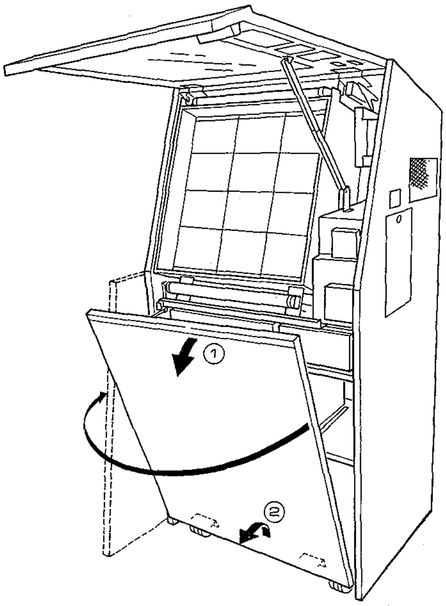
HOW TO OPEN THE MENU DOOR

① Push the lever with a screwdriver through the lock installing hole towards the right and release the lock.
② Hold the menu door up and make sure that it is fastened to the arm.



HOW TO OPEN THE MAIN UNIT DOOR

- The upper part of the main unit door is held to the main unit with a magnet. To open it, pull the upper part towards you.
- A string is attached as stopper on the left side.
- To remove the main unit door for connection etc., hold the door up, and pull the two projections located on the bottom of the door out of the slit.
- When working on the inside of the main unit, put the removed main unit door beside the right side of the unit.
Be careful not to disturb the connection cable.

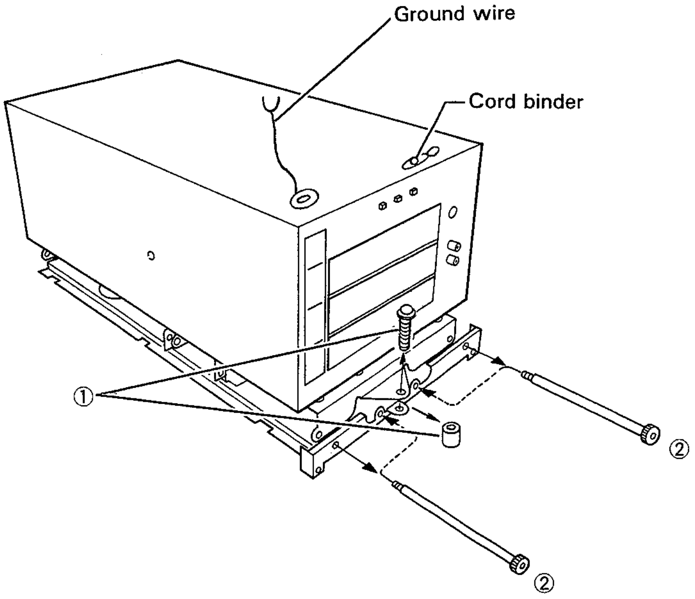


REMOVING THE TRANSPORT SCREWS FROM THE CD PLAYER

When transporting the CD player, make sure to install the screws for protection.

The vibration-protection of the CD player is fixed with three screws for shipping.

① Remove the screws and spacer on the front center.
(Keep the removed screws in the pocket inside the main unit door in case it becomes necessary to move the unit again.)
② Remove those screws on both sides of the front, and install them to the holes indicated by the arrows.



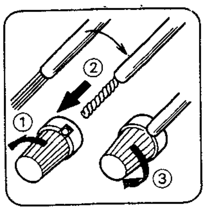
CONNECTION

CONNECTING THE CD PLAYER

① Connect the CD player's CONTROL jack to the controller's CONTROL jack with the supplied control cord.
② Connect the CD player's AUDIO OUT jacks to the amplifier's INPUT jack with the supplied audio cord.
③ Connect the CD player's power cord to the AC OUTLET of the amplifier section.
④ Connect the ground wire to the ground terminal.

CONNECTING THE EXTERNAL SPEAKERS

- External speakers can be connected to the EXTERNAL SPEAKERS terminals located on the rear of the main unit.
- Connect the "+" terminals on this unit to the "+" terminals on the speakers, and the "−" terminals on the unit to the "−" terminals on the speakers.



① Loosen cap.
② Insert wire.
③ Tighten cap.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other.

Speaker impedance

Connect speaker systems with a nominal impedance of between 8 and 16 ohms.

Setting of speaker selector switch

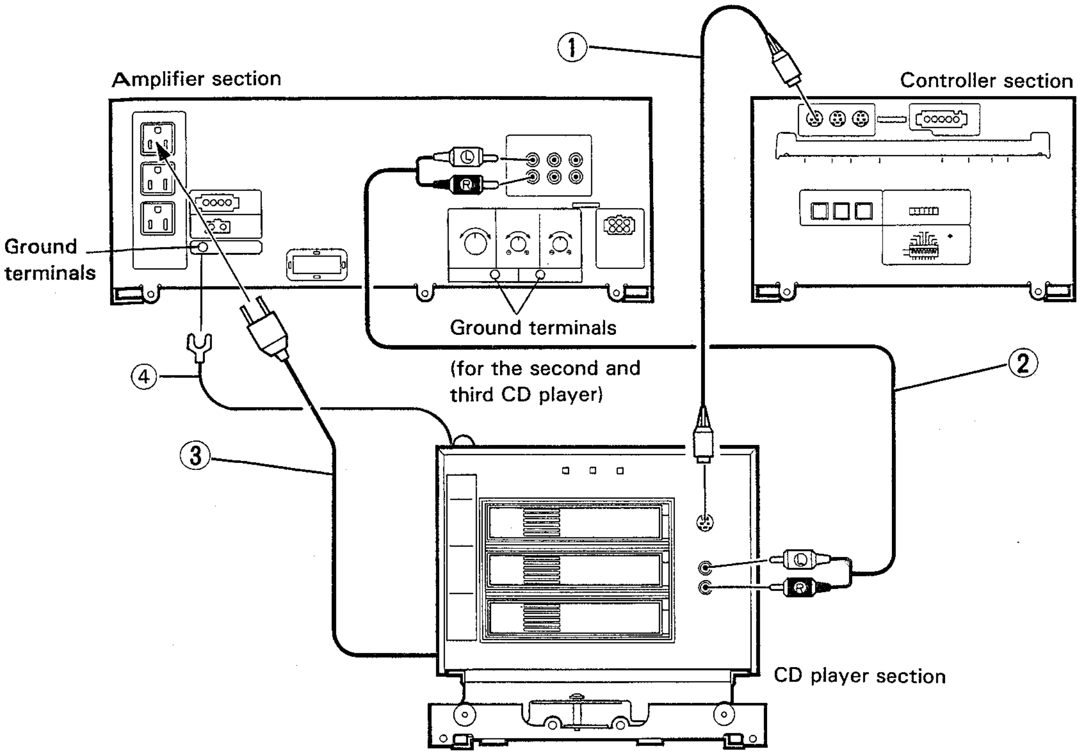
When using only the built-in speakers, set the switch to the right. When using both built-in and external speakers, set the switch to the left side.

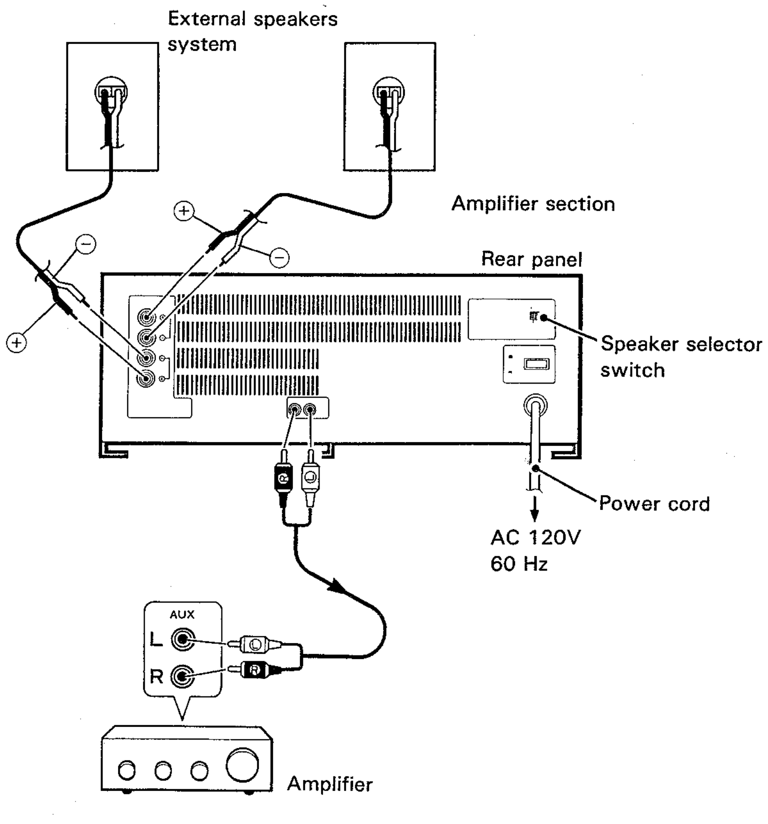
When combining with other devices (such as an amplifier)

Connect the LINE OUT jack located on the rear panel to the input jack of the other device.

CONNECTING THE POWER CORD

After completing connection of all signal lines, connect the power cord to the wall outlet.


①
Amplifier section
Controller section
Ground terminals
Ground terminals
(for the second and third CD player)
②
④
③
CD player section

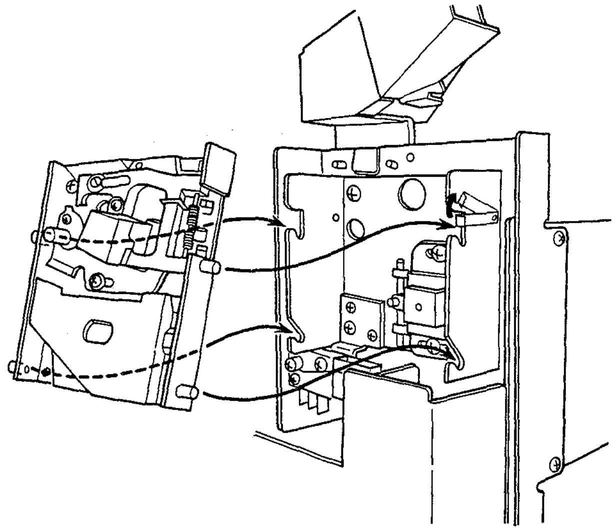

External speakers system
Amplifier section
Rear panel
Speaker selector switch
Power cord
AC 120V 60 Hz
AUX
L
R
Amplifier

ATTACHING THE COIN ACCEPTOR

When using coins for the CD jukebox, the coin acceptor must be installed.

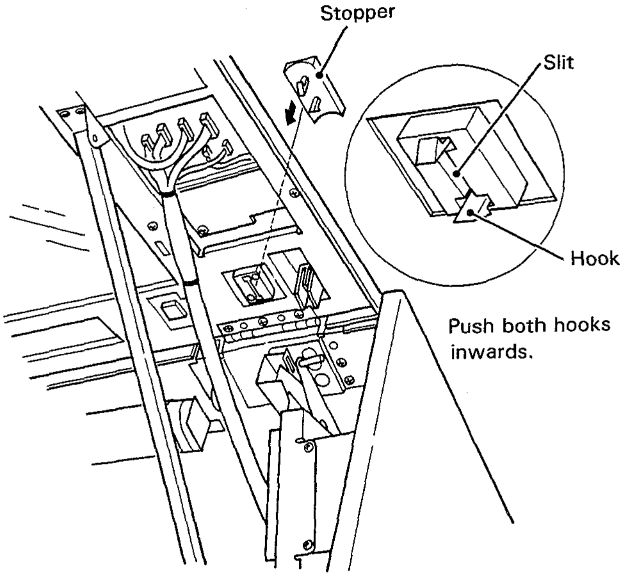
Install the coin acceptor.
Insert the upper part first.

* Use an N-530-A made by CONLUX USA for the coin acceptor.



CAUTION
THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFIRM TO ALL LOCAL CODES.

To prevent coin input, install the supplied stopper in the the coin slot.

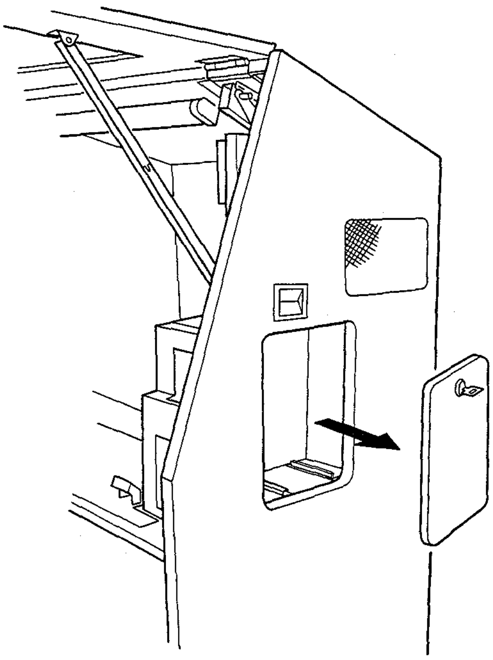


ATTACHING THE BILL ACCEPTOR

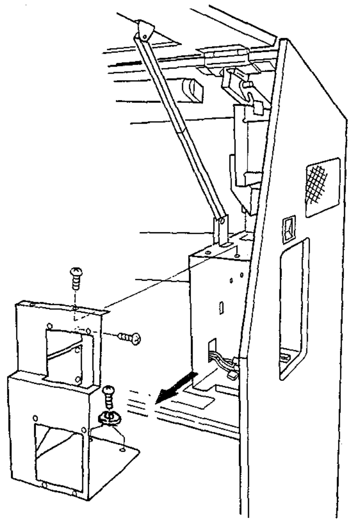
When using bills for the CD jukebox, the bill acceptor must be installed.

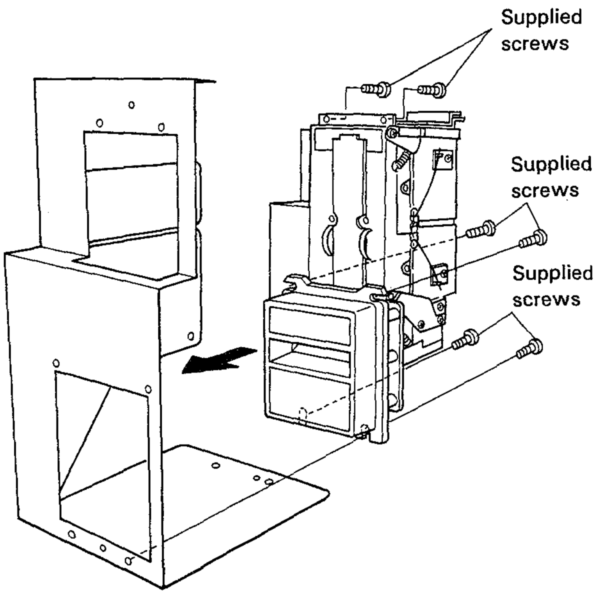
CAUTION
THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFIRM TO ALL LOCAL CODES.

① Open the cover of the money storage located on the right side of the CD jukebox from the front.



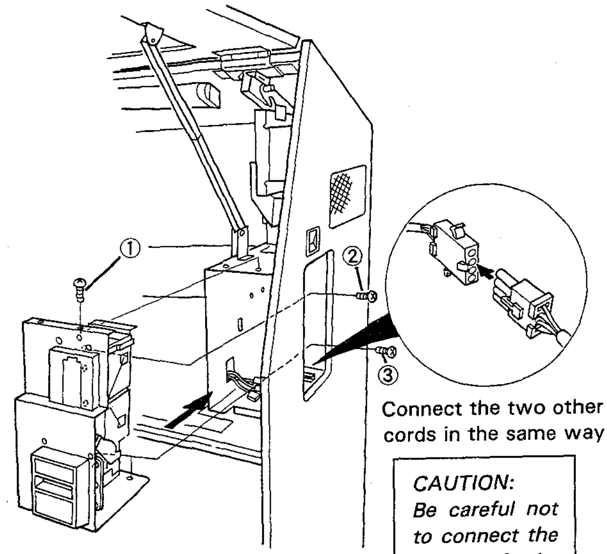
② Take out the bill holder, and install the bill acceptor.





③ Attach the bill acceptor to the CD jukebox with the screws.
Connect the connection cord (2).

i) Attach the bill acceptor to the bill holder.
ii) Fasten the bill holder with the two screws.
iii) Close the menu door.
iv) Adjust the bill acceptor horizontally and vertically (Press the bill acceptor against the panel side so that there is no gap, and the bill inlet is located at the center.), and fasten the lower part with the two screws ③.
v) Tighten the screws ①, ② on both sides.

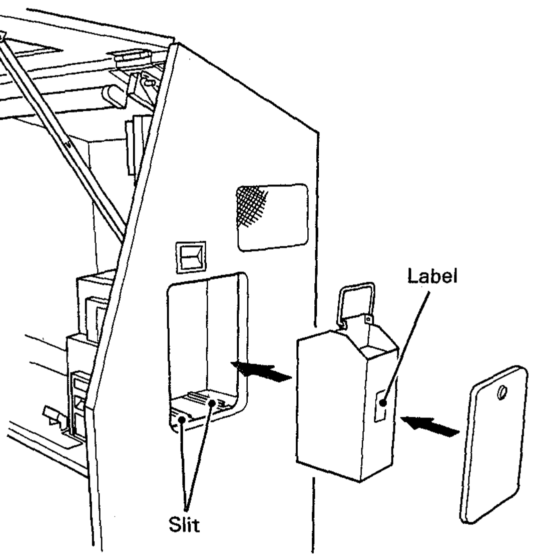


Connect the two other cords in the same way.

CAUTION:
Be careful not to connect the cords of the main unit side.

* Use an NB-2JA-400 made by CONLUX USA for the bill acceptor.

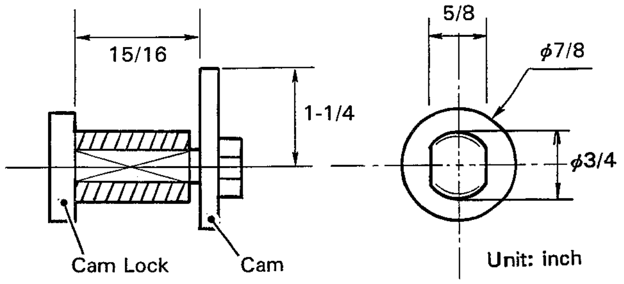
④ Reinstall the coin box.
Insert it into the slot with the labeled side facing out.

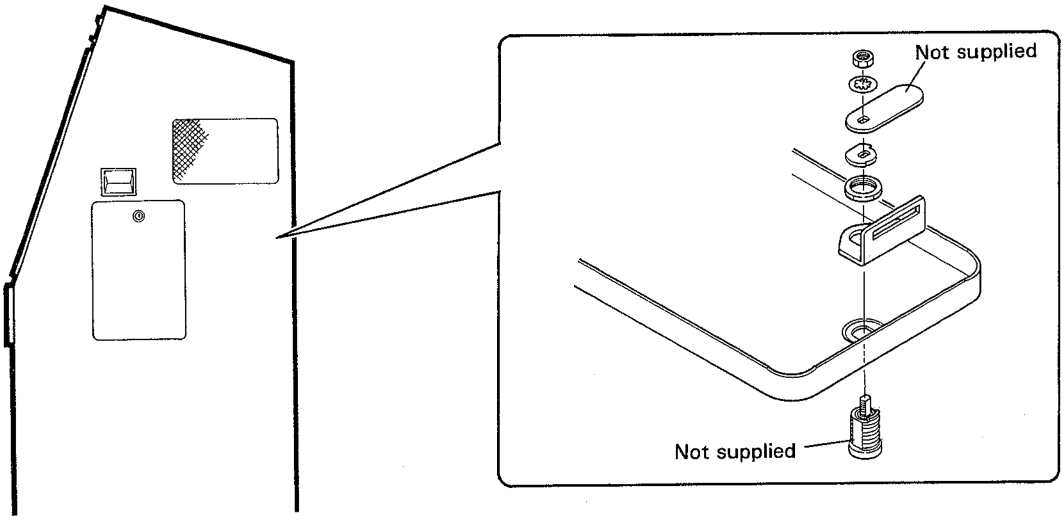


INSTALLING THE LOCK ON THE CHARGE STORAGE COVER

Install a retainer so that the cover can be locked.
Arrange the groove of the guarding metal so that the retainer can move.

A Cam FL 114, CamLock 8078 made by American Lock Co. for the lock of the charge storage cover is recommended.
Install a retainer so that the cover can be locked.

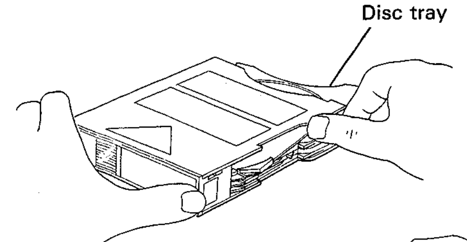

15/16
1-1/4
5/8
ϕ7/8
ϕ3/4
Cam Lock
Cam
Unit: inch

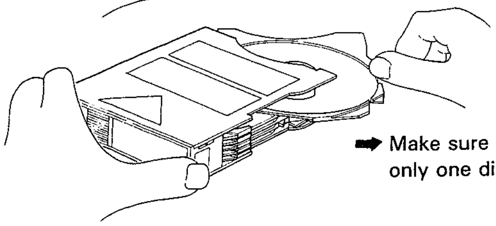

Not supplied
Not supplied

INSTALLING DISCS TO THE MAGAZINES

Insert any discs which you may have into the magazine. Up to six discs may be inserted. The numbering of the discs begins with 1 at the topmost tray, and then increases in order from 2 to 6 for the lower trays.

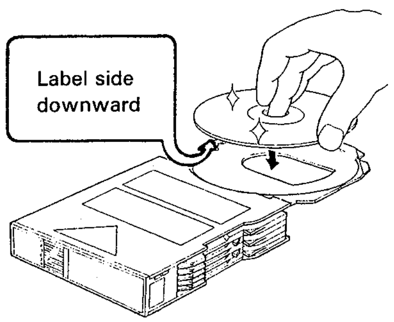
① Pull out only one disc tray.

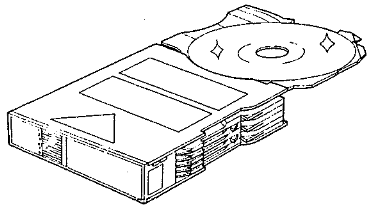




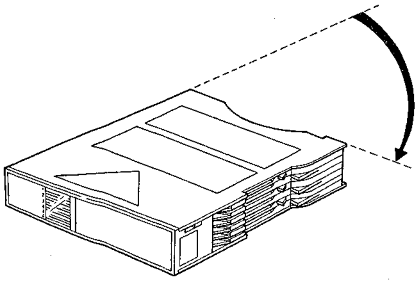
➡ Make sure to pull out only one disc tray.

② Position discs with the label side downward.


Label side downward



③ Push the disc tray back in.



④ Insert other discs by repeating steps ① to ③.

NOTE:

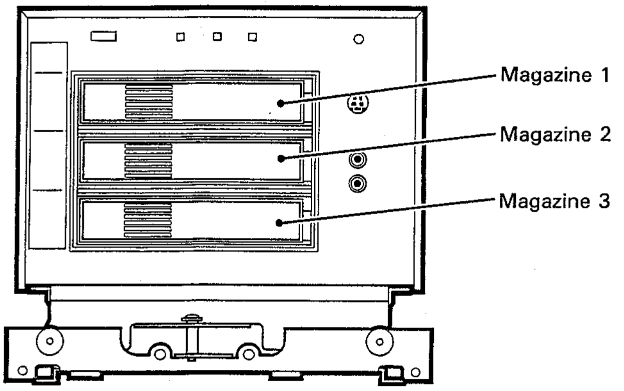
- *Please make sure to only pull out one disc tray at a time. (When a disc tray has been pulled out, do not pull out other disc trays.)*
- *If discs are inserted label side upward, it will not be possible for them to be played. Please make sure to insert them with the label side downward.*
- *Objects other than discs (song cards, explanations of disc contents, etc.), must never be inserted into the disc trays.*
- *Do not touch the playing surface of discs (the iridescent side) with hands or fingers.*

⑤ Insert the magazine into the appropriate magazine insertion slot of the CD player until it clicks,

⑥ Insert the magazines into other magazine insertion slots by repeating step ① to ⑤.

IMPORTANT

Make sure to insert all three magazines into the three magazine insertion slots of the CD player.
Otherwise, the CD player will not operate.
Insert an empty magazine if no discs are required.



CAUTIONS REGARDING HANDLING OF MAGAZINES

- When inserting a magazine into the player, make sure that the direction of insertion is correct.
- After use, store in the case provided. Do not place in locations subjected to high temperatures or exposed to direct sunlight.
- Do not take magazines apart.
- Be careful not to drop or hit magazines against things. Also, do not apply strong force to trays which have been withdrawn.
- Application of benzene, thinner, insecticide or other volatile liquids to a magazine may damage the surface, so keep magazines away from such substances.

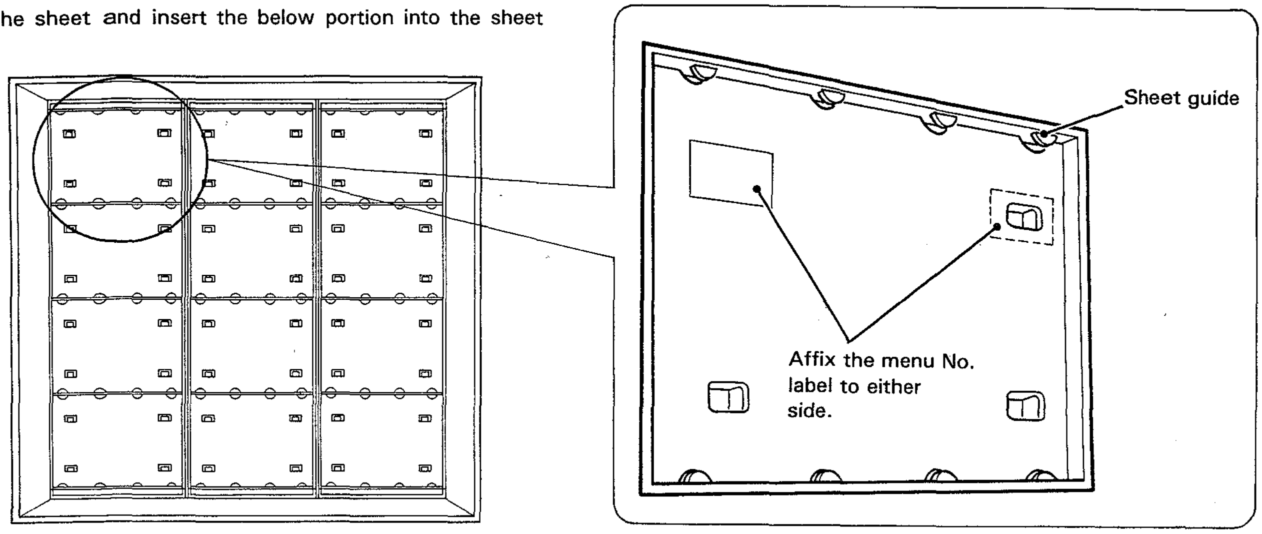
CAUTION

This magazine is for use with the CD JUKEBOX and, because of the wear which naturally occurs, should be replaced at 6 monthly intervals.

The 6 monthly interval is a rule of thumb. The real replacement interval depends on the frequency of use and the circumstances. The ball bearing becomes worn after the same tray has been used for play 5,000 – 8,000 times. Using the worn ball bearing increases the load to the mechanism, resulting in damage on the drive motor or other parts. Early replacement is therefore recommended.

ATTACHING THE MENU SHEET

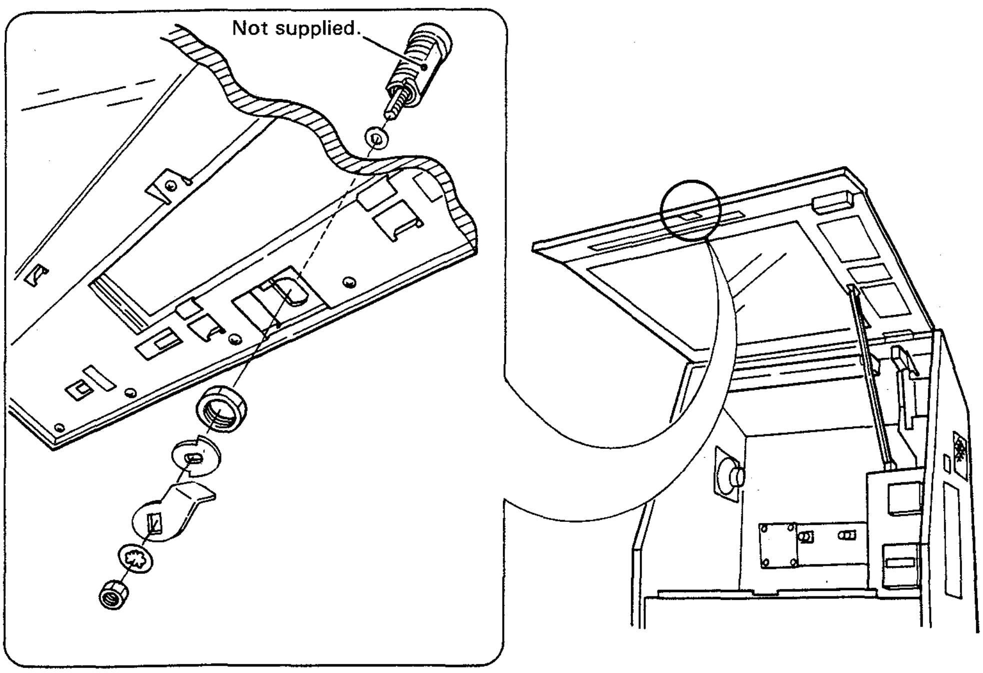
① Affix the menu No. label corresponding to the same number as the disc number of the CD player.
② Insert the above portion of the menu sheet into the sheet guide.
③ Bend the sheet and insert the below portion into the sheet guide.

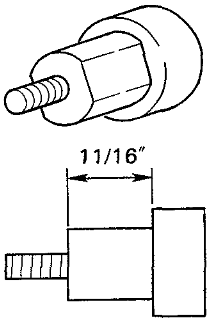

Sheet guide
Affix the menu No. label to either side.

INSTALLING THE LOCK TO THE MENU DOOR

Install the lock as shown in the figure so that the retainer can be moved by the key.
Make sure, and turn the key when closing the door.

Use a CamLock 8068 made by American Lock Co. for the lock of the menu door.

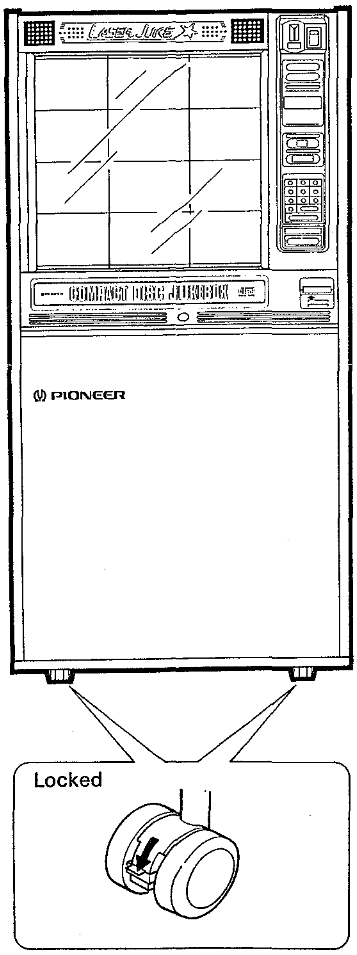

Not supplied.



CASTER LOCKING

The front casters are equipped with a locking mechanism.
Make sure to lock the casters after installation as shown in the figure.

Open the main unit door before caster locking.
(see page 5).

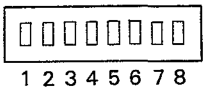


Lift the claw to unlock.

Lower the claw to lock. If locking is difficult, rotate the wheel a little.

SETTING OF THE FUNCTION SWITCHES

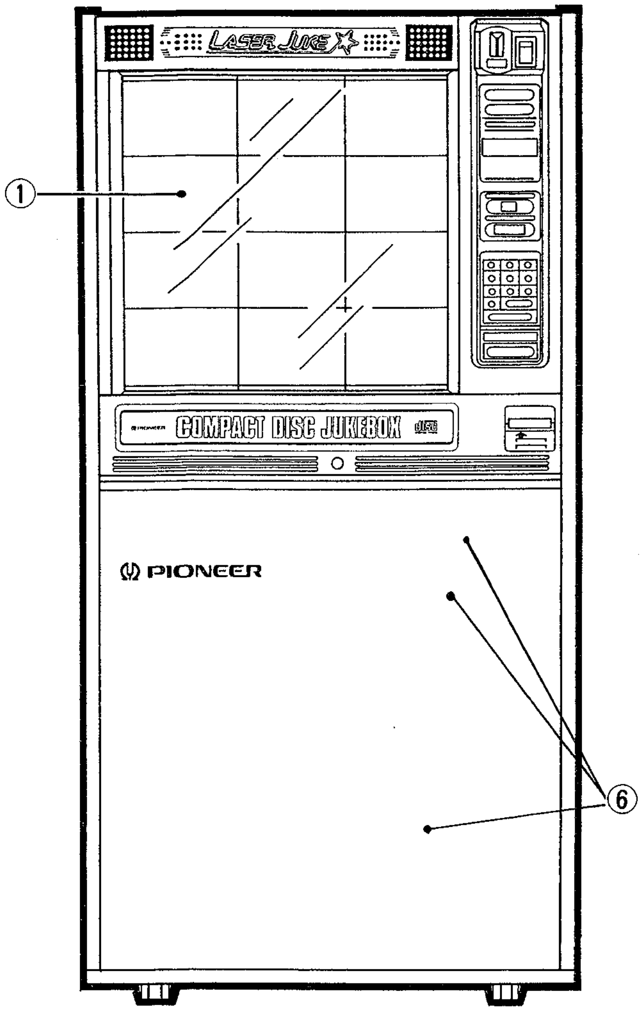
(DIP switches for FUNCTION)
Function setting is effective only when the power is switched ON.

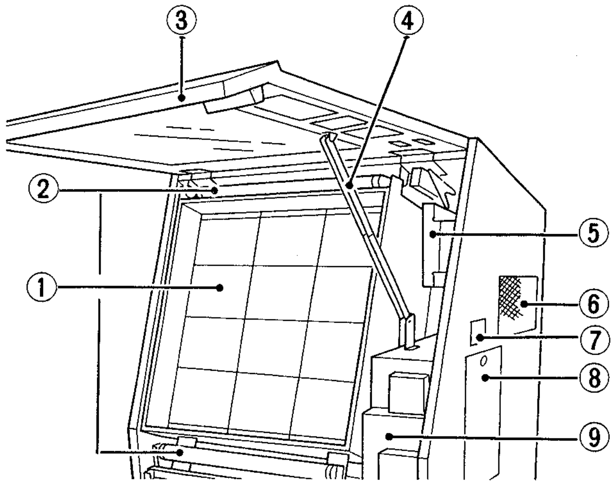


No.	Panel display	Up	Description
		Down	
1	FREE PLAY	No charge	Plays without charge.
		Charge	Plays only when coins/bills are put in.
2	——	——	———
3	——	——	———
4	——	——	———
5	BEST6-10/ RANDOM (Functions when AUTO PLAY 7 is ON.)	UP	Plays back the 6th to 10th BEST songs.
		DOWN	Plays back songs by random selection.
6	——	——	———
7	AUTO PLAY	ON	Selects songs at random and plays them as long as no song is being selected.
		OFF	Does not perform AUTO PLAY.
8	——	——	———

No function is assigned to the switches 2, 3, 4, 6 and 8.

NAME AND FUNCTION OF EACH PART


①
LASER JUKE
COMPACT DISC JUKEBOX
PIONEER
⑥



① **Menu board**

② **Fluorescent lamp for menu illumination**

③ **Menu door**

④ **Arm**

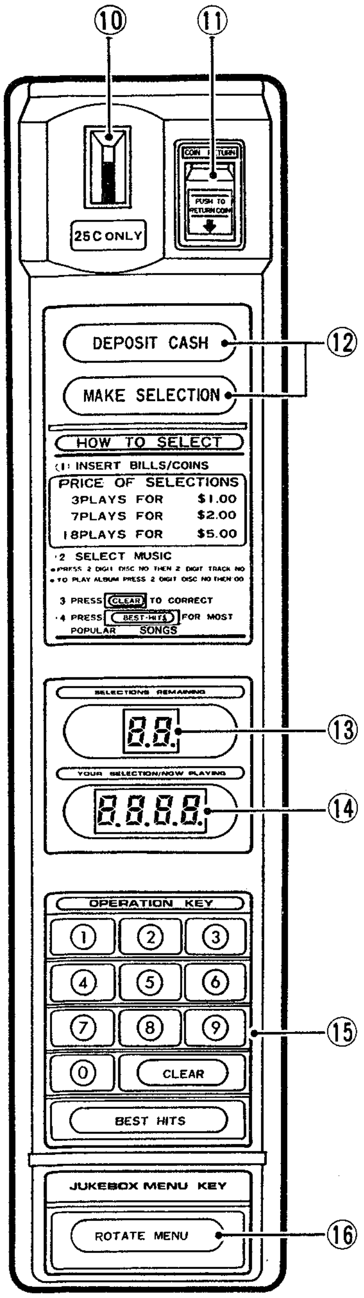
⑤ **Coin acceptor**

⑥ **Speakers**

⑦ **Coin-return hole**
When a coin is inserted while the indication "DEPOSIT CASH" is off or unacceptable kinds of coins are inserted, they are returned via this hole.

⑧ **CHARGE STORAGE COVER**

⑨ **Bill holder**


⑩
⑪
25C ONLY
PUSH TO RETURN COIN
DEPOSIT CASH
MAKE SELECTION
⑫
HOW TO SELECT
(1) INSERT BILLS/COINS
PRICE OF SELECTIONS
3PLAYS FOR $1.00
7PLAYS FOR $2.00
18PLAYS FOR $5.00
2 SELECT MUSIC
• PRESS 2 DIGIT DISC NO THEN 2 DIGIT TRACK NO
• TO PLAY ALBUM PRESS 2 DIGIT DISC NO THEN 00
3 PRESS CLEAR TO CORRECT
4 PRESS BEST-HITS FOR MOST POPULAR SONGS
SELECTIONS REMAINING
8.8.
⑬
YOUR SELECTION/NOW PLAYING
8.8.8.8.
⑭
OPERATION KEY
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⓪
CLEAR
BEST HITS
⑮
JUKEBOX MENU KEY
ROTATE MENU
⑯

(OPERATION SECTION)

⑩ Coin insertion hole

CAUTION:
Inserted coins will not be returned even though the coin-return lever is operated. Insert only the amount of coins needed.

⑪ Coin-return lever

Operate the coin-return lever when a deformed or steel imitation coin is caught. This will cause the coin to return via the coin-return hole.

⑫ Operation guide display

- **DEPOSIT CASH.**
  When this indication is lit, you can insert cash.
- **MAKE SELECTION.**
  This indication is lit when the system is ready for music selection.

⑬ SELECTIONS REMAINING indicator

This indication shows the number of music titles you can select using the inserted cash.
"FP" is displayed during free play.

⑭ YOUR SELECTION/NOW PLAYING indicator

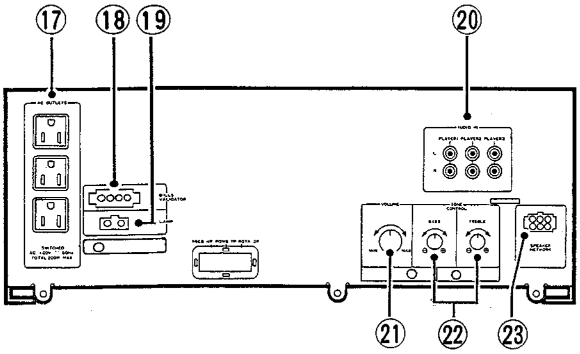
This indication shows the number of credit entering by using numeric keys.
When no key input is being done, this indication shows the number of the music title currently being played.
"OPEN" is displayed while the menu door is open.

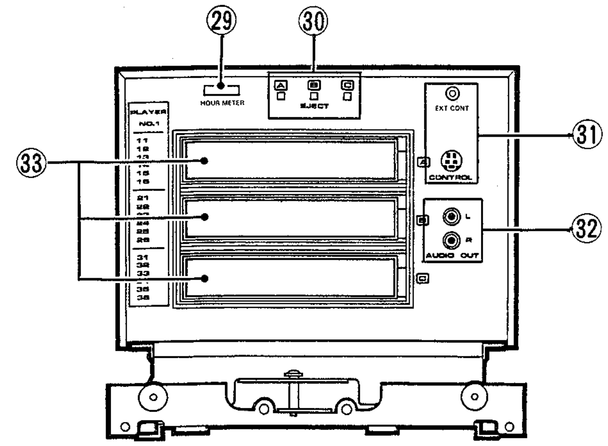
⑮ OPERATION key

- **Numeric keys**
  Use these keys to enter the disc number and track number to be played.
- **CLEAR key**
  The selection can be canceled by pressing the CLEAR key while the digits are flushing after entering the last digit.
- **BEST HITS key**
  The most-popular piece of music on the location is automatically selected.

⑯ ROTATE MENU key

To rotate the menu board.
A maximum of 3 menu boards can be displayed.


⑰
⑱
⑲
⑳
AC OUTLETS
SWITCHED
AC 120V 60Hz
TOTAL 200W MAX
BILLS VALIDATOR
LAMP
AUDIO IN
PLAYER1 PLAYER2 PLAYER3
L
R
VOLUME
MIN
MAX
TONE CONTROL
BASS
TREBLE
SPEAKER NETWORK
㉑
㉒
㉓


㉙
㉚
HOUR METER
EJECT
EXT CONT
CONTROL
L
R
AUDIO OUT
PLAYER NO.1
㉛
㉜
㉝

(INSIDE OF THE MAIN UNIT DOOR)

■ Amplifier section

* Cords are connected to ⑱, ⑲ and ㉓ at shipping.

⑰ AC OUTLETS (SWITCHED 200 W MAX)

Connect the power cord of the CD player.
Power supplied through these outlets is turned ON/OFF by the equipment's POWER switch. The total electrical power consumption of connected equipment should not exceed 200 W.

NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.
This can cause the equipment to malfunction.

⑱ BILLS VALIDATOR terminal

⑲ LAMP terminal

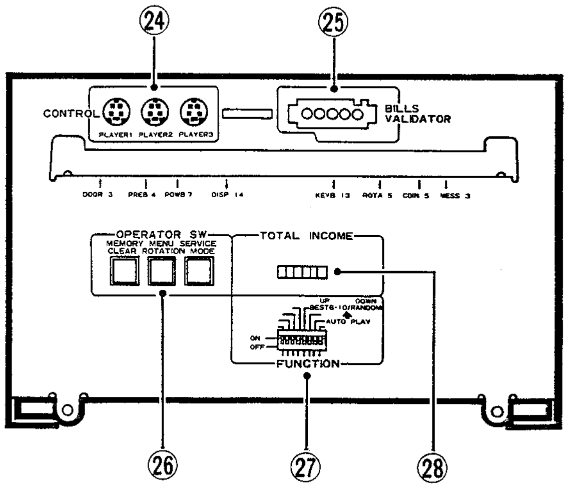
⑳ AUDIO IN jacks

Connect to the AUDIO OUT jacks of the CD player with the audio cord.

㉑ VOLUME control knob

㉒ TONE CONTROL knob

BASS . . . . Adjusts the bass level.
TREBLE . . . . Adjusts the treble level.


㉔
㉕
CONTROL
PLAYER1 PLAYER2 PLAYER3
BILLS VALIDATOR
DOOR 3
PREB 4
POWB 7
DISP 14
KEYB 13
ROTA 5
COIN 5
MESS 3
OPERATOR SW
MEMORY CLEAR
MENU ROTATION
SERVICE MODE
TOTAL INCOME
UP
DOWN
BEST6-10/RANDOM
AUTO PLAY
ON
OFF
FUNCTION
㉖
㉗
㉘

㉓ SPEAKER NETWORK terminal

■ Controller section

㉔ CONTROL jacks

Connect to the CONTROL jack of the CD player with the designated control cord.

㉕ BILLS VALIDATOR terminal

A cord is connected to the terminal at shipping.

㉖ OPERATOR SW (switches)

MEMORY CLEAR:
To clear the previous memory.
MENU ROTATION:
To rotate the menu board.
SERVICE MODE:
To set to service mode.

㉗ FUNCTION switches

See page 13.

㉘ TOTAL INCOME counter

Displays the amount of cash deposited. Reset impossible.

■ Compact disc player section

㉙ HOUR METER

Displays the duration of time the unit has been used.

㉚ EJECT keys

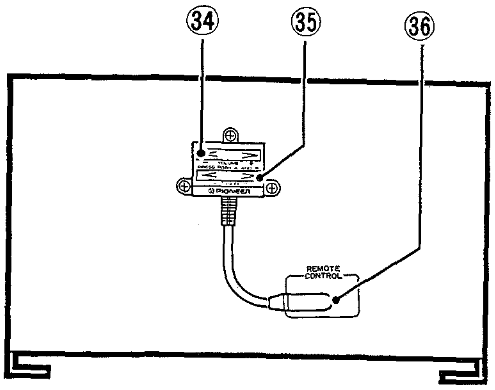
Press to eject the magazines.

㉛ CONTROL jacks

CONTROL:
Connect to the specified CONTROL jacks (PLAYER 1) of the controller section.
EXT CONT.:
A terminal to externally control the CD player. Usually not used.

㉜ AUDIO OUT jacks

Connect to the specified AUDIO IN jack (PLAYER 1) of the amplifier section.



㉝ Magazine insertion slots

Insert the 6-disc magazine.
Make sure to insert all three magazines into the three slots. Otherwise, the CD player will not operate.
Insert an empty magazine if no disc is necessary.

(REAR PANEL AND REMOTE CONTROL UNIT)

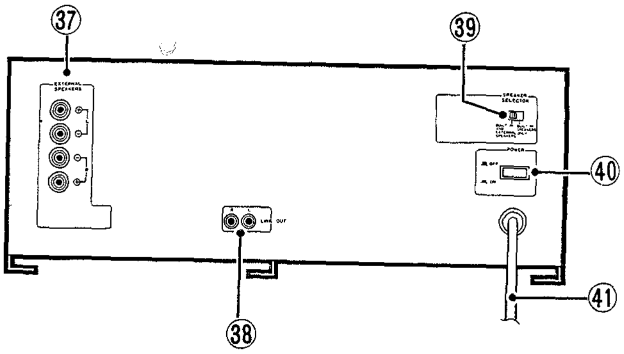
㉞ VOLUME key

+: Increases the volume level.
−: Decreases the volume level.

㉟ CANCEL key

To cancel a selected song.
When both ends of the key A and B are pressed simultaneously, the song being played will be stopped and the next selected song will be played.

㊱ Remote control terminal



㊲ EXTERNAL SPEAKERS terminals

L: Connect the left speaker system as seen from the listening position.
R: Connect the right speaker system as seen from the listening position.

NOTE:
Connect a speaker system having a nominal impedance ranging from 8Ω to 16Ω.

㊳ LINE OUT jacks

CD audio is output.

㊴ SPEAKER SELECTOR switch

Selects the speakers to be used for playback.
When using only the built-in speakers: Set the switch to the right.
When using both built-in and external speakers: Set the switch to the left.

㊵ POWER switch

Press to turn the power of the unit ON/OFF.

㊶ POWER cord

OPERATION

HOW TO SELECT A SONG

Ordinary selection

1. Rotate the menu by pressing the ROTATE MENU key, and select the desired song.

2. Insert bills or coins.

3. Select a song.

- Type in a two-digit disc number and a track number.
- To play an album, type in a two-digit disc number and "00".
- The selection can be canceled by pressing the CLEAR key while the digits are flushing after entering the last digit.
- A beep sound occurs when confirming the input. Keys which are not available for input are not lit. If the not-lit key is depressed, a beep sound occurs twice.

One-touch selection

1. Insert bills or coins.

2. Press BEST HITS key for the most popular songs.

Playback sequence

- Playback is made by arranging the reserved selection in a certain order.
- Multiple selections are played only once.

Volume adjustment and song cancellation by the remote control unit

Volume can be adjusted by the supplied remote control unit.
The volume increases when the "+" side is pressed, and decreases when "−" side is pressed.
To cancel the song being played, press both ends of the RESET key at the same time.

REPLACING THE MENU AND DISC

To update the contents of the jukebox menu, replace the CD and corresponding menu sheet together.

① Open the menu door.
② Open the main unit door.
③ Replace the menu sheet corresponding to the replaced disc number.
④ Remove the magazine, which contains the disc to be replaced, from the CD player.
  1. Press the EJECT key (A/B/C) of the magazine to the removed.
  2. Remove the magazine.
  3. Pull out the disc tray and replace the disc.
  4. Return the disc tray.
  See page 10 for the installation of the disc to the magazine.
⑤ Insert the magazine into the slot of the CD player as before.
⑥ Close the main unit door and menu door, and lock them.

ADDING A CD PLAYER

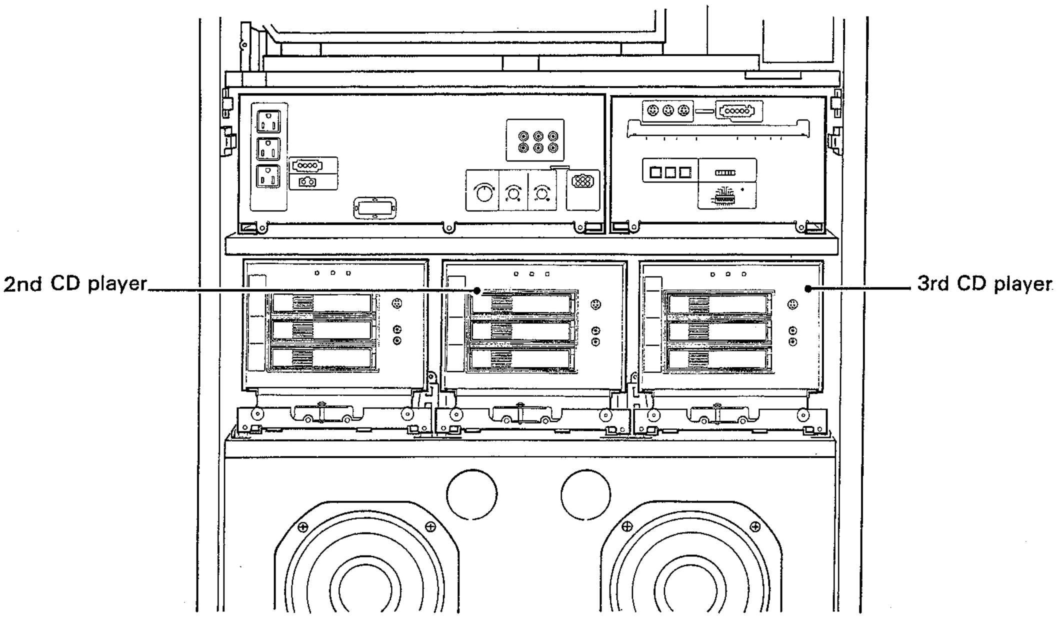
A maximum of two CD players can be added. (A total of three CD players can be used).

① Turn the power OFF.
② Open the menu door.
③ Remove the main unit door.
④ Remove the transport screws of the CD player.
  - See page 6.
⑤ Install the CD player.
  - Insert the CD player along the installation rail.
⑥ Connect the CD player's CONTROL jack to the controller's CONTROL jack using the designated control cord.
⑦ Connect the CD player's AUDIO OUT jack to the amplifier's INPUT jack using the audio cord.
⑧ Connect the CD player's power cord to the amplifier's AC OUTLET.

NOTE:
When connecting the CD player to the amplifier and controller sections, connect the second CD player to PLAYER 2, and the third CD player to PLAYER 3.

⑨ Reinstall the main unit door.
⑩ Close the menu door and lock it.

Refer to the operating instructions of PD-MV55

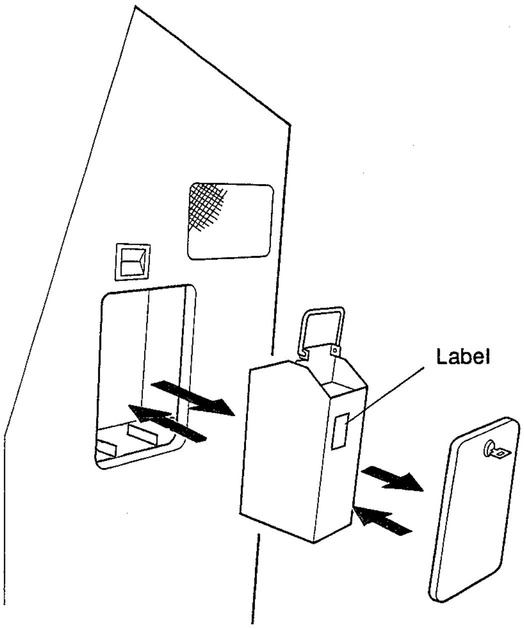


REMOVING COINS/BILLS

Taking out the coin box

① Open the charge storage cover, and take out the coin box by pulling the handle.
- Where the coin box is equipped with an anti-burglar key, remove the key before taking the coin box out.

② Collect the coins/bills.
- After collecting the coins, fix the coin box as it was before. Incline the lever towards you and push it. Holding from the label side place the box into the holder between the two alignment slits. Inclining the lever in the reverse direction makes the attachment of the coin box impossible. Where necessary, install an anti-burglar key.

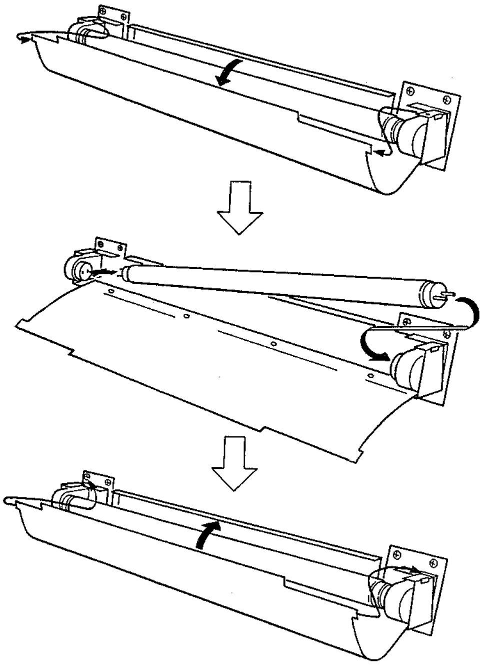


MAINTENANCE

CHANGING THE FLUORESCENT LAMPS

There are two fluorescent lamps located on the top and the bottom of the menu board.

① Turn the power OFF before changing the fluorescent lamps.
② Open the menu door.
③ Remove the colored cover of the fluorescent lamp.
④ Replace the fluorescent lamp (15 W).
⑤ Fasten the colored cover as before.



CHANGING THE GLOW LAMP

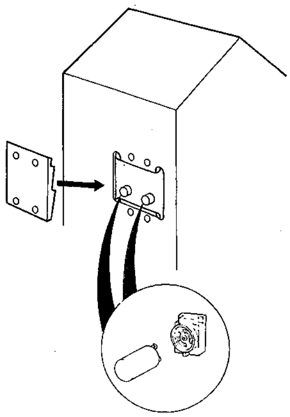
To replace the glow lamp, remove the glow lamp cover on the rear.

① Turn the power OFF before changing the glow lamp.

② Open the glow lamp cover.

③ Replace the glow lamp.
- The right glow lamp is for the lower fluorescent lamp, and the left glow lamp is for the upper fluorescent lamp.
- Remove the burnt-out glow lamp by turning it to the left. Install a new glow lamp.

④ Install the glow lamp cover and tighten the screws.



SERVICE MODE

HOW TO USE SERVICE MODE (Operation mode)

The CJ-V55 is provided with a service mode (operation mode) in which the following operations are available:

	Submode		Function mode		Function mode and operation ($\boxed{A}\boxed{B}$; A ··· Function mode, B ··· Operation)	
Reference mode	0	Audits	0	Playback audits (counting after previous reset)	00	Displays the number of songs selected for free-of-charge playback.
					01	Displays the number of songs selected for paid playback.
					02	Displays the number of songs selected in the normal mode.
					03	Displays the number of BEST HIT songs selected.
					04	Displays the number of albums selected.
					05	Displays the number of times of actual playback.
			1	Cash audits (counting after previous reset)	10	Displays total cash (25 cents = 1 unit)
					11	Displays total coins input.
					12	Displays total 1 $ bills input.
					13	Displays total 5 $ bills input.
					14	Generates the total and displays the bonus value.
			2	Non-resettable playback audits (cannot be reset after shipping)	20	Displays the number of songs selected for free-of-charge playback.
					21	Displays the number of songs selected for paid playback.
					22	Displays the number of songs selected in the normal mode.
					23	Displays the number of BEST HIT songs selected.
					24	Displays the number of albums selected.
					25	Displays the number of times of actual playback.
			3	Non-resettable cash audits (cannot be reset after shipping)	30	Displays total cash.
					31	Displays total coins input.
					32	Displays total 1 $ bills input.
					33	Displays total 5 $ bills input.
					34	Generates the total and displays the bonus value.
	1	Others	0	Most popular song*	00	Alternately displays the number of the song most frequently selected and the number of times of playback.
					01	Alternately displays the number of the 2nd popular song and the number of times of playback.
					~	
					09	Alternately displays the number of the 10th popular song and the number of times of playback.
			1	Most popular disc**	10	Alternately displays the number of the disc most frequently selected and the number of times of selection.
					11	Alternately displays the number of the 2nd popular disc and the number of times of selection.

	Submode		Function mode		Function mode and operation ($\boxed{A}\boxed{B}$; A ··· Function mode, B ··· Operation)	
Reference mode					≀	
					19	Alternately displays the number of the 10th popular disc and the number of times of selection.
			2	Least popular disc**	20	Alternately displays the number of the disc least frequently selected and the number of times of selection.
					21	Alternately displays the number of the disc which has been second least frequently selected and the number of selection.
					≀	
					29	Alternately displays the number of the disc which has been tenth least frequently selected and the number of selection.
			3	Error history	30	Displays the most recent error code.
					31	Displays the error code of the previous error.
					32	Displays the error code of 2 steps before.
					33	Displays the error code of 3 steps before.
					34	Displays the error code of 4 steps before.
					35	Displays the error code of 5 steps before.
					36	Displays the error code of 6 steps before.
					37	Displays the error code of 7 steps before.
					38	Displays the error code of 8 steps before.
					39	Displays the error code of 9 steps before.
			4	Number of times of cancellation by track skips	40	Alternately displays the number of the disc most frequently selected and the number of time of cancellation.
					41	Alternately displays the number of the 2nd frequently cancelled and the number of time of cancellation.
					≀	
					49	Alternately displays the number of disc 10th frequently cancelled and the number of time of cancellation.
			5	Display of ID No.	50 51	) Displays location No.
					52 53	) Displays serial No. The ID No. consists of four sections, and each section will be displayed separately. $\underbrace{***}_{50}\underbrace{***}_{51}-\underbrace{**}_{52}\underbrace{***}_{53}$ Location No. Serial No.
			6	Display of microcomputer Ver.	6	Displays the version of the built-in microprocessor.
Setting mode	2	Price & bonus	0	Credit currency unit	0	Currency unit for credit 25¢ = unit (example: 1$ = 4)
			1	Number of songs per unit	1	Number of songs per unit (example: 4 = 3 songs)
			2	Bonus setting	20	Credit value for bonus
					21	Bonus value for the credit of "21"
					22	Credit value for bonus
					23	Bonus value for the credit of "22"
					24	Credit value for bonus
					25	Bonus value for the credit of "24"
					26	Credit value for bonus
					27	Bonus value for the credit of "26"
					28	Credit value for bonus
					29	Bonus value for the credit of "28"

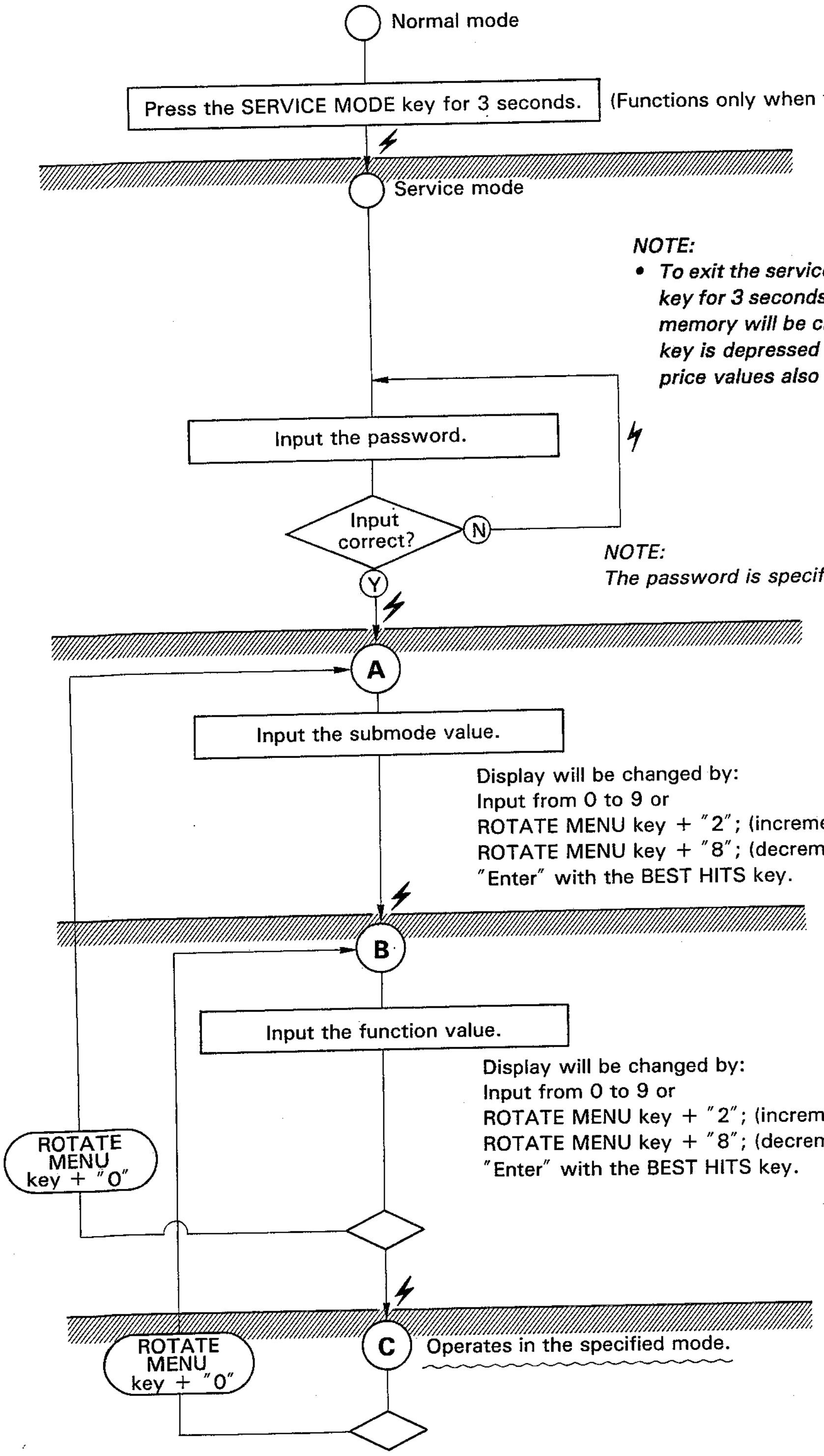
	Submode		Function mode		Function mode and operation ($\boxed{A}\boxed{B}$; A ··· Function mode, B ··· Operation)	
Setting mode	3	Others	0	Number of times of skip for cancellation	0	Sets the number of track skips allowed in one song.
			1	Auto-play interval input	1	Sets the interval time during auto-play in units of minutes.
			2	Pass word input	2	Sets a 4-digit number.
			3	ID No. input	30 31 32 33	) Location No.) Serial No. The ID No. consists of four sections. Input it as follows: $\underbrace{***}_{30}\underbrace{***}_{31}-\underbrace{**}_{32}\underbrace{***}_{33}$ Location No. Serial No.
Delete mode	4	Delete	0	Deleting playback audits	0	The playback audits setting is cleared by pressing the CLEAR key.
			1	Deleting cash audits	1	The setting of cash audits is cleared by pressing the CLEAR key.
			2	Deleting most popular data	2	The data concerning a disc, which are stored in the memory, can be cleared by pressing the CLEAR key.
			3	Deleting error history	3	The data on error history is cleared by pressing the CLEAR key.
			4	Deleting credit	4	Credit is cleared by pressing the CLEAR key.
			5	Deleting song selection	5	The song selection is cleared by pressing the CLEAR key.
Aging mode	5	Aging	0	Number of time of aging	0	Number of times of aging.
			1	Aging (1)	1	All the songs are played in sequence starting with the uppermost disc (i.e., increase in the disc number). Every time one song has been completely played, the disc is returned to the magazine and the elevation mechanism is returned to the home position (the lowest position). The next song is then accessed. The system stops when all the songs have been completely played.
			2	Aging (2)	2	One song on each disc is played for 30 seconds in sequence, starting with the uppermost disc. The elevation mechanism is returned to the home position (the lowest position) after termination of playback. The next song (i.e., the next disc) is then accessed. The system stops when all the discs have been played.
			3	Aging (3)	3	The first and last songs on each disc are played for 30 seconds for each song in sequence starting with the uppermost disc. The elevation mechanism is returned to the home position (the lowest position) after termination of playback. The next song (i.e., the next disc) is then accessed. The system stops when all the discs have been played.
	6	Hard ware check	0	LED check	0	All LEDs light up.
			1	DIP switch setting display	1	DIP switch setting display.

* In case that there are more than one song with the same number of times of selection, the song that has been selected last is given priority.

** In case that there are more than one disc having the same number of times of selection, the disc with the smaller disc number is given priority.

SERVICE MODE (OPERATION MODE) flowchart

(During operation mode, the ROTATE MENU key functions as the shift key.)


Normal mode
Press the SERVICE MODE key for 3 seconds.
Service mode
Input the password.
Input correct?
N
Y
A
Input the submode value.
B
Input the function value.
ROTATE MENU key + "0"
ROTATE MENU key + "0"
C
Operates in the specified mode.

(Functions only when the door is open.)

NOTE:

- *To exit the service mode, press the SERVICE MODE key for 3 seconds. All data except "Non-resettable" memory will be cleared when the MEMORY CLEAR key is depressed for about 15 seconds. Bonus and price values also return to the initial values.*

NOTE:
The password is specified as "0000" upon shipping.

Display will be changed by:
Input from 0 to 9 or
ROTATE MENU key + "2"; (increment)
ROTATE MENU key + "8"; (decrement)
"Enter" with the BEST HITS key.

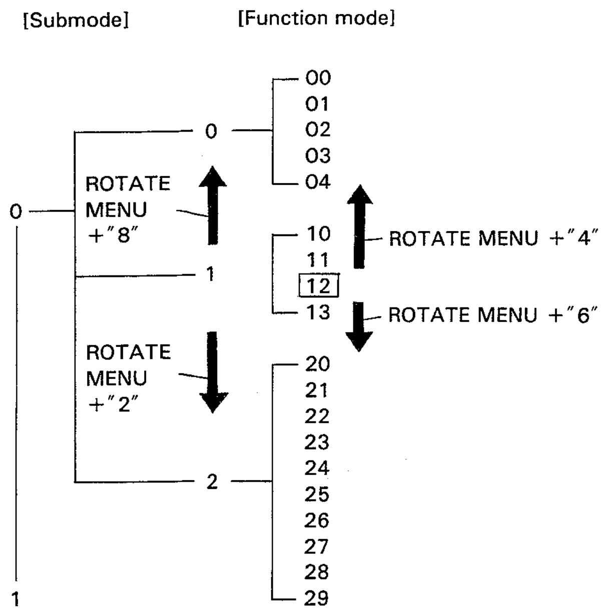
Display will be changed by:
Input from 0 to 9 or
ROTATE MENU key + "2"; (increment)
ROTATE MENU key + "8"; (decrement)
"Enter" with the BEST HITS key.

Shift key

During the service mode, the ROTATE MENU key functions as the shift key. When one of keys "0", "2", "4", "6" or "8" is pressed while depressing the ROTATE MENU key, the operation will be as follows:

ROTATE MENU	+	0	Reverses the progress of the service mode. Progress can be reversed as Ⓒ → Ⓑ or Ⓑ → Ⓐ (see the SERVICE MODE flowchart).
		2	① Increases the numeric value during input of the value for submode or function mode. ② Increases the submode value during execution (step Ⓒ). ③ Increases the function mode value (upper digits) during execution (step Ⓒ).
		8	① Decreases the numeric value during input of the value for submode or function mode. ② Decreases the submode value during execution (step Ⓒ). ③ Decreases the function mode value (upper digits) during execution (step Ⓒ).
		6	Increases the function mode item (lower digits) during execution (step Ⓒ).
		4	Decreases the function mode item (lower digits) during execution (step Ⓒ).

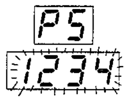
(Example) During execution in the submode 0 and the function mode 12.



Display and Usage

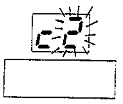
During the service mode, display is made with the indicators of SELECTION REMAINING and YOUR SELECTION/NOW PLAYING.

1. Inputting the password



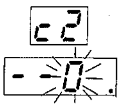
Displays "PS".
Input the password with the number keys.
(Example) 1 2 3 4
Upon correct input, "beep" will sound and it changes to submode input.
Upon incorrect input, "beep-beep" will sound. Input the password correctly.

2. Inputting submode



Displays "C".
Input the submode with the number keys.
(Example) 2
When the BEST HITS key is pressed, "beep" will sound and it changes to function mode input.
When a number not existing in the submode is input, "beep-beep" will sound. Input a correct number.

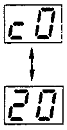
3. Inputting function mode



The "–" light up for the first two digits.
Input the value for the function mode (an upper digit or an upper and lower digit) with the number keys.
(Example) 0
When the BEST HITS key is pressed, "beep" will sound and changes to execution mode.
When number(s) not existing in the function mode are input, "beep-beep" will sound and it reverses to the previous display. Input correct number(s).

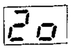
4. During execution

(1) SELECTION REMAINING Indicator



Alternately displays the submode (c2) and the function mode (20) for approximately once a second each.
If an upper digit is specified for the function mode value, a small "0" will be displayed for the lower digit.

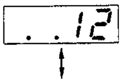
(Example)



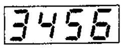
(2) YOUR SELECTION/NOW PLAYING indicator

- **Submode 0**

Up to 999,999 will be displayed.
The number will be displayed completely if the value is smaller-than-or-equal-to 9,999.
If the number is greater-than-or-equal-to 10,000, the first two digits and the remaining four digits will be displayed alternately.
(Example) Displaying 123,456:



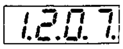
(Displays periods and the first two digits.)



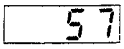
(Displays the remaining four digits.)

- **Submode 1**

[Function mode 00 to 09]
Displays the song number and the number of times of playback alternately.
(Example) Playback of track No. 1207 for 57 times:



(Displays the track No. with periods.)

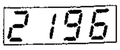


(Number of times of playback)

[Function mode 10 to 19, 20 to 29]
Displays the disc number and the number of times as in the function mode 00 to 09. The disc number is displayed in the upper two digits, and the lower two digits are set to "00".

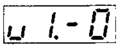
[Function mode 30 to 39]
Displays the 4-digit error codes.

(Example) Search in the lowest disc of the third CD player fails due to exceeding the time limit.



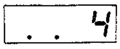
[Function mode 50 to 53]
The ID number is displayed in 3-digit, 3-digit, 2-digit and 3-digit numbers.

[Function mode 6]
Displays the version of the built-in microprocessor.



- **Submode 2**

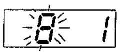
[Function mode 0 or 1]
Displays a number up to two digits with periods.
(Example) When "04" is input:



When the BEST HITS key is pressed, "beep" will sound, and it changes to function mode 1 (from 0) or to 20 (from 1).

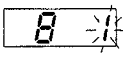
[Function mode 20 to 29 (max. 99)]
Five types of bonus rates can be set. Set the value of credit where the bonus applies in the function modes 20, 22, 24, 26 or 28, and the corresponding number of bonuses in the function modes 21, 23, 25, 27 or 29.
(Example) Setting credit 8 and bonus 1 to the function modes 20 and 21:

- Function mode 20



Displayed with blinking upper two digits.

- When the BEST HITS key is pressed, "beep" will sound and it changes to the function mode 21.
- Function mode 21



Displayed with blinking lower two digits.

- When the BEST HITS key is pressed, "beep" sound is output and changes to the function mode 22.

(Example of bonus rate setting)

Function mode			Function mode
20	8	1	21
22	20	2	23
24	32	3	25
26	0	0	27
28	0	0	29

An identical credit value cannot be specified in the same setting. For example, when the bonus rate has been set as in the above table and credit value 20 is input to function mode 20, "beep-beep-beep" warning will sound and the credit value of the function mode 21 will change to 2, because the same value exists in the function mode 22. The credit values of function mode 24 and 25 will change to those of function modes 22 and 23.

Likewise, if credit value 8 is input to function mode 22, "beep-beep-beep" warning will sound and the function mode will change to 21, because the same value exists in the function mode 20. The credit values of function mode 24 and 25 will change to those of function modes 22 and 23.

The bonus rate is stored in sequence from the smallest credit value. If the order has been changed during setting, the sequence will be reorganized according to the following conditions ("0" is treated as a maximum value):

(1) Shift key function of either ROTATE MENU +"2" or ROTATE MENU +"0" is operated when one of the function modes 20 to 29 has been specified.

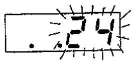
(2) "0" is input in the function mode where the credit value is "0".

(3) A value is input to the function mode 29 and the BEST HITS key is pressed.

(4) To cancel the service mode.

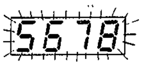
- **Submode 3**

[Function mode 0 to 1]
Displays a number up to two digits with periods.
(Example) Inputting "24": (Inputting "4"=04)



When the BEST HITS key is pressed, "beep" will sound and it changes to the next function mode.

[Function mode 2]
Displays a 4-digit number.
(Example) Inputting "5678":



When the BEST HITS key is pressed, "beep" will sound and it changes to function mode 30.

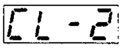
[Function mode 30 to 33]
The ID number is displayed in a 3-digit number for function modes 30, 31 and 33, and in a 2-digit number for function mode 32.

$$\underbrace{***}_{30}\underbrace{***}_{31}-\underbrace{**}_{32}\underbrace{***}_{33}$$

When the BEST HITS key is pressed, it changes to the next function mode. For function mode 33, however, the mode does not change.

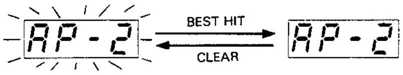
- **Submode 4**

Displays "CL" and the function mode.
(Example) Function mode 2:



- **Submode 5**

The display is blinking during stand-by. This submode is activated when the BEST HITS key is pressed, and the display stops blinking and lights steady.



ERROR CODE

Item	Error code	Option	Description
CASH	00	——	Trouble with coin acceptance*
	01	——	Trouble with $1 bill acceptance*
	02	——	Trouble with $5 bill acceptance*
	03	——	The bill stacker is full
PLAYER	20	Player number	Command break
	21	Disc number	Search timeout
	22	Disc number	Defocus
	23	Disc number	No disc
	24	Disc number	Trouble with setup
	25	Disc number	Impossible to return
	26	Disc number	Trouble with disc select
	27	Disc number	The select mechanism cannot return
COMMU-NICATION with CDP	40	Player number	Disabled communication
	41	Player number	Unknown code returned from the player.
	42	Player number	The player did not recognize the command.
	13	——	Undefined DRT line
	60	——	Undefined DIP switch

* Input time of (bill) signal is too long.

Other

- Error code 00 - 99 Up to 100 codes
- Option number
  CD player number:
    01 for the first CD player
    02 for the second CD player
    03 for the third CD player
  Disc number: the upper two digits when entered.
    (Examples)
    96: the lowest disc in the third CD player
    11: the uppermost disc in the first CD player

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Check the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest authorized PIONEER service center or your dealer to carry out repair work.

Symptom	Probable cause	Remedy
Cannot select songs.	• No coins/bills are input. • Incorrect connection of the CD player.	• Input the specified charge. • Connect correctly.
Magazine is not ejected when EJECT key is pressed.	• Power plug is disconnected from outlet. • Power switch is OFF.	• Connect plug to AC OUTLET of the amplifier section. • Press POWER switch to ON.
When playback is started, it stops immediately.	• Disc is loaded upside down. • Smudges on the disc, etc.	• Load the disc correctly with the label side downward. • Clean the fog from the disc, and then play it again.
No sound	• Output cords are incorrectly or loosely connected. • Pin plugs and/or terminals are dirty.	• Connect properly. • Clean away dirt.
Sound is distorted, and noise occurs.	• Pin plugs and/or terminals are dirty.	• Clean away dirt.
With certain discs, loud noise is produced, or play stops.	• Disc has a bad scratch or warp. • Disc is extremely dirty.	• Replace the disc. • Clean disc.

SPECIFICATIONS

Amplifier Section

Continuously Average Power Output is 100 Watts * per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz, with no more than 0.5 % total harmonic distortion.

* Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifier.

Frequency Response	20 Hz to 20 kHz ±1.5 dB
Tone Control	
Bass (100 Hz)	Max. +10 dB, Min. −10 dB
Treble (10 kHz)	Max. +10 dB, Min. −10 dB

CD player section

Signal-to-Noise ratio	94 dB or more
Dynamic Range	85 dB or more
Wow and Flutter	±0.001 % or less
Frequency Response	4 Hz to 20 kHz ±1.5 dB
Total Harmonic Distortion	0.1 % or less
Output Voltage	1.8 V
Number of channels	2 channels (stereo)
Dimensions	239 (W) x 463 (D) x 215 (H) mm 9-7/16 (W) x 18-1/4 (D) x 8-7/16 (H) in
Weight	9 kg (19 lb 14 oz)
Power Requirements	AC120 V, 60 Hz
Power Consumption	25 W

Speaker Section

Enclosure	Bass-reflex type
Loudspeakers:	
Woofer	25 cm (10 in) x 2
Mid range	10 cm (4 in) x 2
Tweeter	6.6 cm (2-1/2 in)x 2
Expansion speaker	10 cm (4 in) x 2
Nominal Impedance	8 Ω
Frequency Range	30 Hz to 20 kHz
Sensitivity	90 dB/W.m
Maximum Power	100 W

Miscellaneous

Power Requirements	AC120 V, 60 Hz
Power Consumption	300 W
AC outlets	
Switched (x3)	Total 200 W MAX.
Dimensions	797 (W) x 618 (D) x 1640 (H) mm 31-3/8 (W) x 24-5/16 (D) x 64-9/16 (H) in
Weight	146 kg (322 lb 5 oz)
Operating temperature	+5°C to +35°C (+41°F to +95°F)
Operating humidity	5 % to 85 %

Audio output

Terminal	RCA pin-jack
EXT SP terminal	L,R x 1
Initialized time	3 min. or less/CD player
Access time between playing	15 sec. or less

Others

Number of CD discs	54 CD discs (18 discs with standard plus additional 36 with option)
Number of CD players	One CD player (additional two CD players with option)
Acceptance of $1 and $5 bills (option)	
Acceptance of 25 cents coins (option)	
Remote control unit (wired)	Volume up/down, cancellation

Functions

- Song selection (up to 99 songs) ·············· normal selection, cancellation of selection, best hit selection, album play
- Price per play
- Autoplay
- ID code
- Password
- Data output
- Income counter
- Selection memory clear

Accessories

- Magazine x 3
- Coin / bill box x 1
- Remote control cord (30 m) x 1
- Charge storage cover x 1
- Stopper for the coin acceptance inlet x 1
- Menu number label x 1
- Rate seal x 1
- Bag for supplied components x 1
- Stiffening plate x 1
- Unlocking plate x 1
- Cord clamper x 2
- Screw A (M4 x 8) x 1
- Wooden screw x 4
- Washer x 2
- Follow-up card x 1
- Operating instructions x 1
- Screw B (tapping; M3 x 6) x 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

The Magazine Type Multi-Play CD Players with mark and the Magazines with the same mark are compatible for 5-inch (12cm) discs.

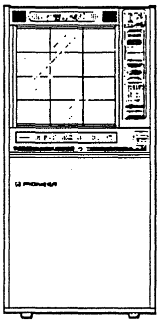
Published by Pioneer Electronic Corporation.
Copyright © 1990 Pioneer Electronic Corporation.
All rights reserved.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER LASER ENTERTAINMENT, INC. 22010 S.Wilmington Ave., Suite 201, Carson, CA. 90745 U.S.A.
<90A01YY0C01>
Printed in Japan <DRA1107-A>

2821

Service Manual

PIONEER
The future of sound and vision.



ORDER NO.
ARP1913

COMPACT DISC JUKEBOX

CJ-V55
PD-MV55

- Refer to the service manual (1) ARP1912, CJ-V55.

- This manual is applicable to the KUC type.
- PD-MV55/KUC type is a optional CD player of the CJ-V55/KUC type.
- PD-MV55/KUC type is the same as the built-in CD player of the CJ-V55/KUC type except packing and accessory parts.

CONTENTS

1. SAFETY INFORMATION ········ 2
2. EXPLODED VIEWS AND PARTS LIST ········ 3
3. PACKING ········ 30
4. SCHEMATIC DIAGRAMS AND P. C. BOARDS PATTERN ········ 32
5. BLOCK DIAGRAM ········ 82
6. ELECTRICAL PARTS LIST ········ 84
7. ADJUSTMENTS ········ 91
8. IC DESCRIPTION ········ 102
9. NOTES ON REPLACING THE LITHIUM CELL AND RAM (IC3 : TC5564APL-15) ········ 105

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© PIONEER ELECTRONIC CORPORATION 1990
IFI MAR. 1990 Printed in Japan

2821

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

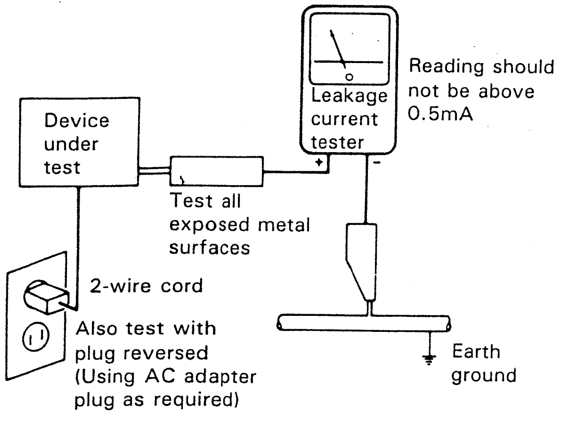
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Leakage current tester
Reading should not be above 0.5mA
Device under test
+
-
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

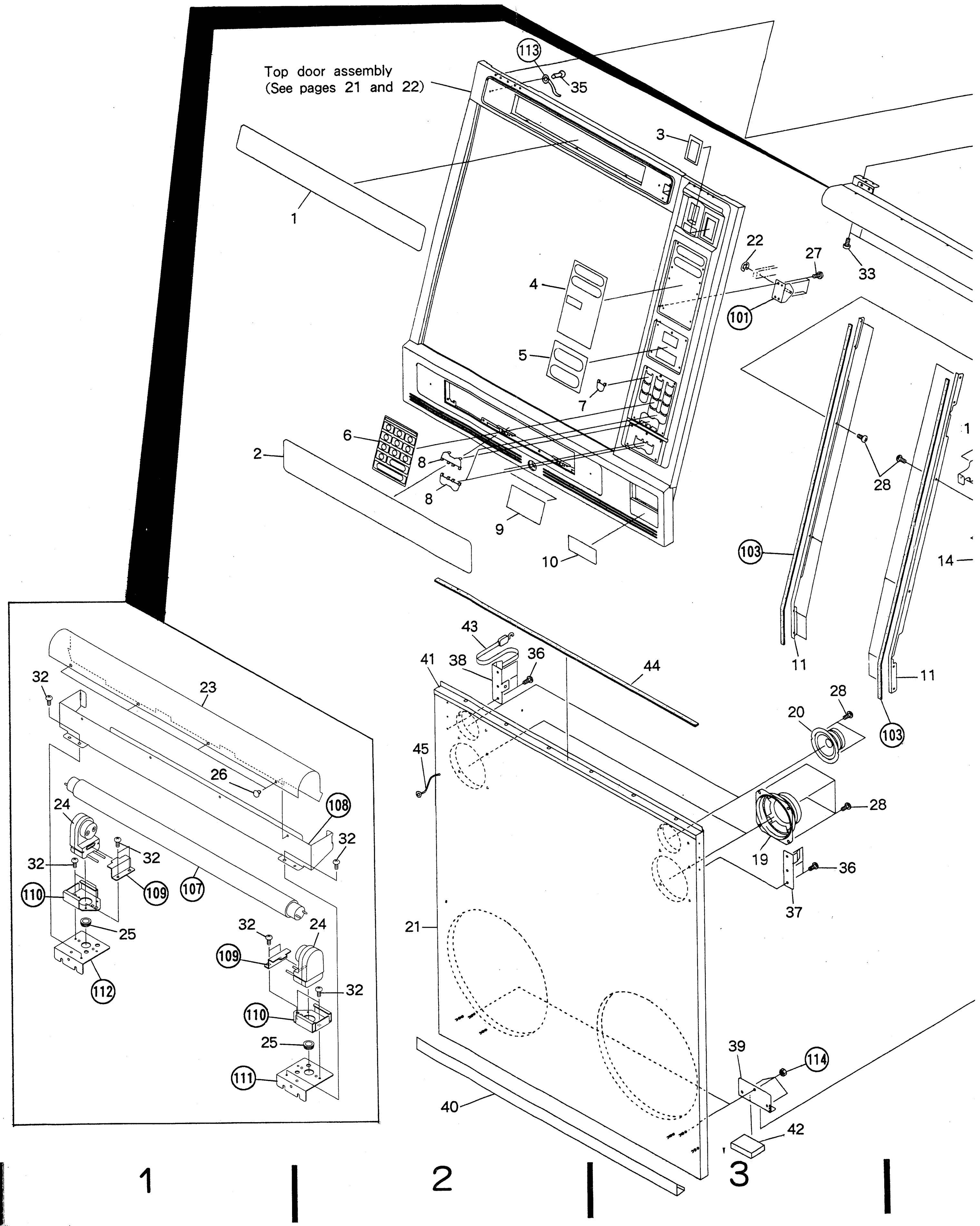
NOTES :
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

2.1 MAIN SECTION

2.1.1 EXTERIOR (1)

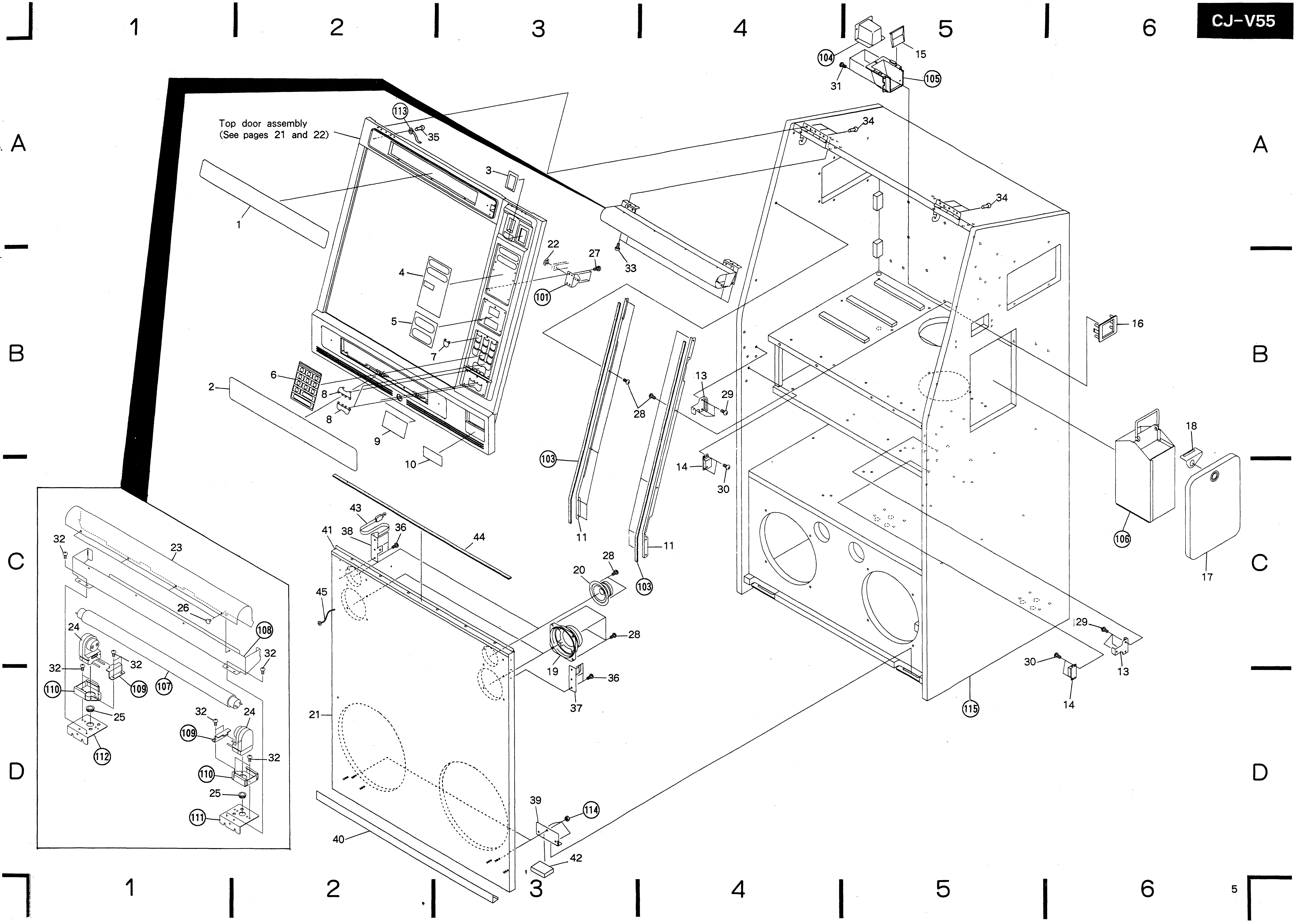
Parts List

Mark	No.	Part No.	Description
	1	DAH1379	Sign board (upper)
	2	DAH1380	Sign board (under)
	3	DAH1183	Coin-return lever sheet A
	4	DAH1381	Operation guide display (A)
	5	DAH1382	Operation guide display (B)
	6	DAH1431	Key sheet
	7	DNK1236	Key knob A
	8	DNK1214	Key knob B
	9	DAH1432	Key sheet (B)
	10	DAH1393	Bill sheet
	11	SNB1035	Door stopper
	12		• • • • •
	13	SNB1037	Hook holder
	14	SNX1034	Magnet catch
	15	DNK1618	Coin-return door
	16	DNK1616	Coin-return cover
	17	DNH1335	Cover of the money storage
	18	DNF1256	Reinforced plate
	19	10-757A	Speaker (Mid-range)
	20	D66-AP45-52L	Speaker (Tweeter)
	21	SMG1148	Grill
	22	YE30FUC	E ring ϕ 3
	23	DEC1224	Illumination sheet
	24	DKK1006	Fluorescent lamp socket (upper)
	25	DEC1220	Bushing
	26	DEC-176	Plastic rivet
	27	PMH30P060FMC	Screw
	28	TNC35P140FZK	Screw
	29	SBA1061	Screw
	30	RWC35P160FZK	Screw
	31	IPZ30P080FMC	Screw
	32	BBZ30P060FMC	Screw
	33	DBA1007	Screw (3.5 × 12mm)
	34	PMB40P080FMC	Screw
	35	IPZ30P080FMC	Screw
	36	PMA60P100FMC	Screw
	37	SNB1039	Catch plate L
	38	SNB1040	Catch plate R
	39	SNB1041	Door hinge
	40	SNH1018	Sash
	41	SNH1017	Sash
	42	SEB1072	Cushion
	43	SEW1014	Safety belt
	44	SEB1068	Packing
	45	SDF1013	Earth lug assembly
	101		DS holder assembly
	102		• • • • •
	103		Shield packing (B)
	104		Coin guide (B)
	105		Coin-return tray
	106		Coin box assembly
	107		Fluorescent lamp
	108		Reflection plate
	109		Socket holder (S)
	110		Socket holder (L)
	111		Lamp bracket (L)
	112		Lamp bracket (R)
	113		• • • • •
	114		Nut
	115		Cabinet



ıerefore, when
/ be unavailable.

ssembly
ssembly
ıg (B)
B)
tray
sembly
lamp
ate
r (S)
r (L)
ət (L)
ət (R)

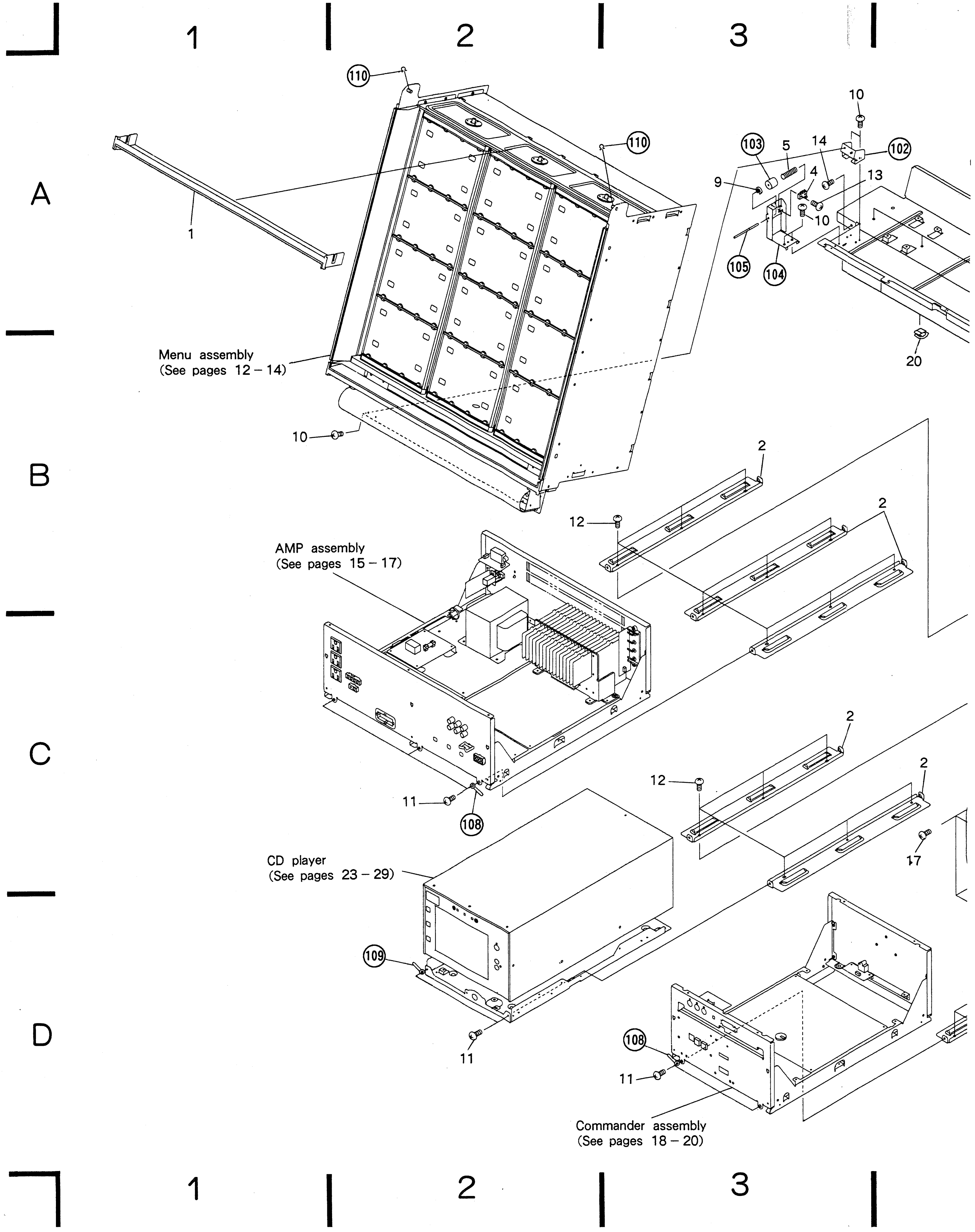


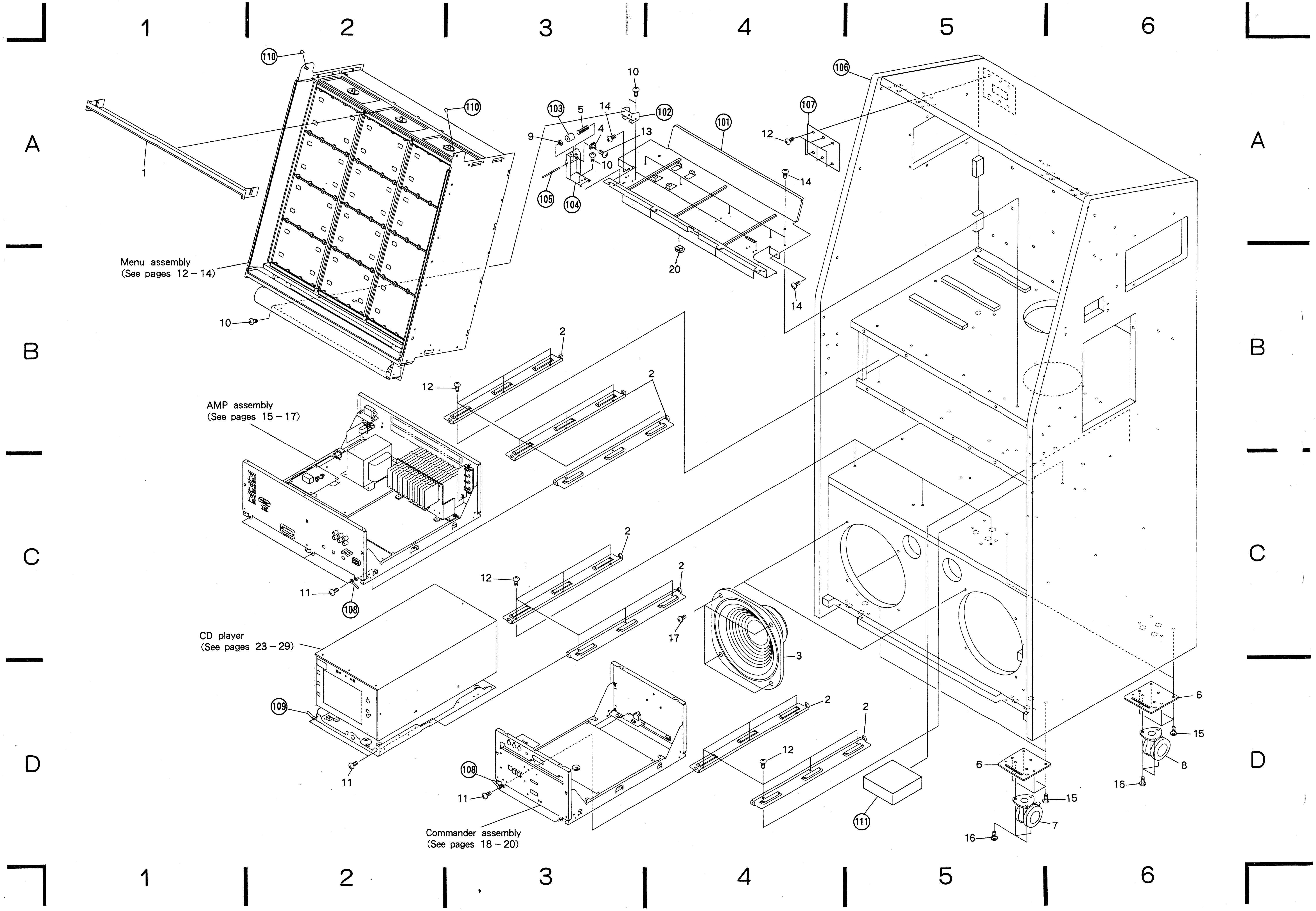
1
2
3
4
5
6
A
B
C
D
Top door assembly
(See pages 21 and 22)
113
35
1
3
4
5
6
7
2
8
8
9
10
22
27
101
33
34
34
104
15
31
105
16
18
106
17
103
28
13
29
14
30
11
11
103
43
41
38
36
44
45
20
28
19
28
36
37
21
40
39
114
42
29
13
30
14
115
32
23
26
108
24
32
32
32
110
109
107
25
112
32
24
109
32
110
25
111

2.1.2 EXTERIOR (2)

Parts List

Mark	No.	Part No.	Description
	1	DNK1627	Plate
	2	SNA1219	Rail
	3	25-803A	Speaker (Woofer)
	4	DSF1001	Micro switch
	5	DBH1036	Door lock spring
	6	SNA1220	Reinforced plate
	7	DXB1022	Caster A
	8	DXB1023	Caster B
	9	YE20FUC	E ring ϕ 2
	10	BBZ30P060FMC	Screw
	11	AMZ40P080FMC	Screw
	12	TNC35P140FZK	Screw
	13	PMH20P100FMC	Screw
	14	DBA1007	Screw (3.5 × 12mm)
	15	SBA1068	Screw
	16	PMB50P300FMC	Screw
	17	SBA-194	Screw
⚠	18	DDE1034	Connection cord
	19	PDE1065	Cord with pin plug
	20	DEC1184	Shell clip
	101		Top door stay
	102		MB fixing plate
	103		DRS guide
	104		Door switch holder
	105		Door lock shaft
	106		Cabinet
	107		Airway cover
	108		Earth lug assembly
	109		Cord clamper
	110		R pin
	111		Magazine assembly

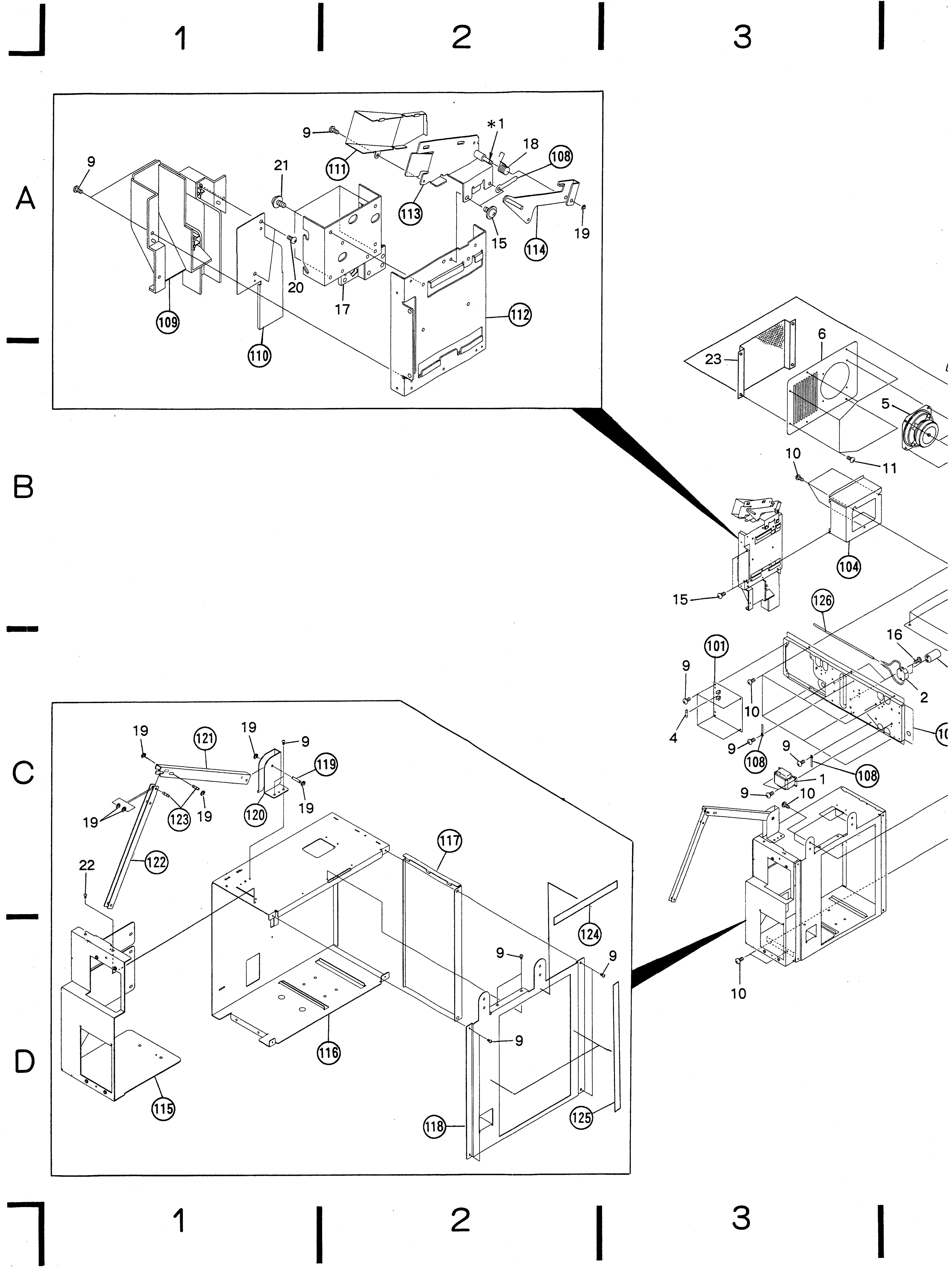

1
2
3
A
B
C
D
110
110
1
10
103
5
14
102
9
4
13
10
105
104
20
Menu assembly
(See pages 12 – 14)
10
2
12
2
AMP assembly
(See pages 15 – 17)
11
108
2
12
2
17
CD player
(See pages 23 – 29)
109
11
108
11
Commander assembly
(See pages 18 – 20)
1
2
3


A
B
C
D
Menu assembly
(See pages 12 – 14)
AMP assembly
(See pages 15 – 17)
CD player
(See pages 23 – 29)
Commander assembly
(See pages 18 – 20)

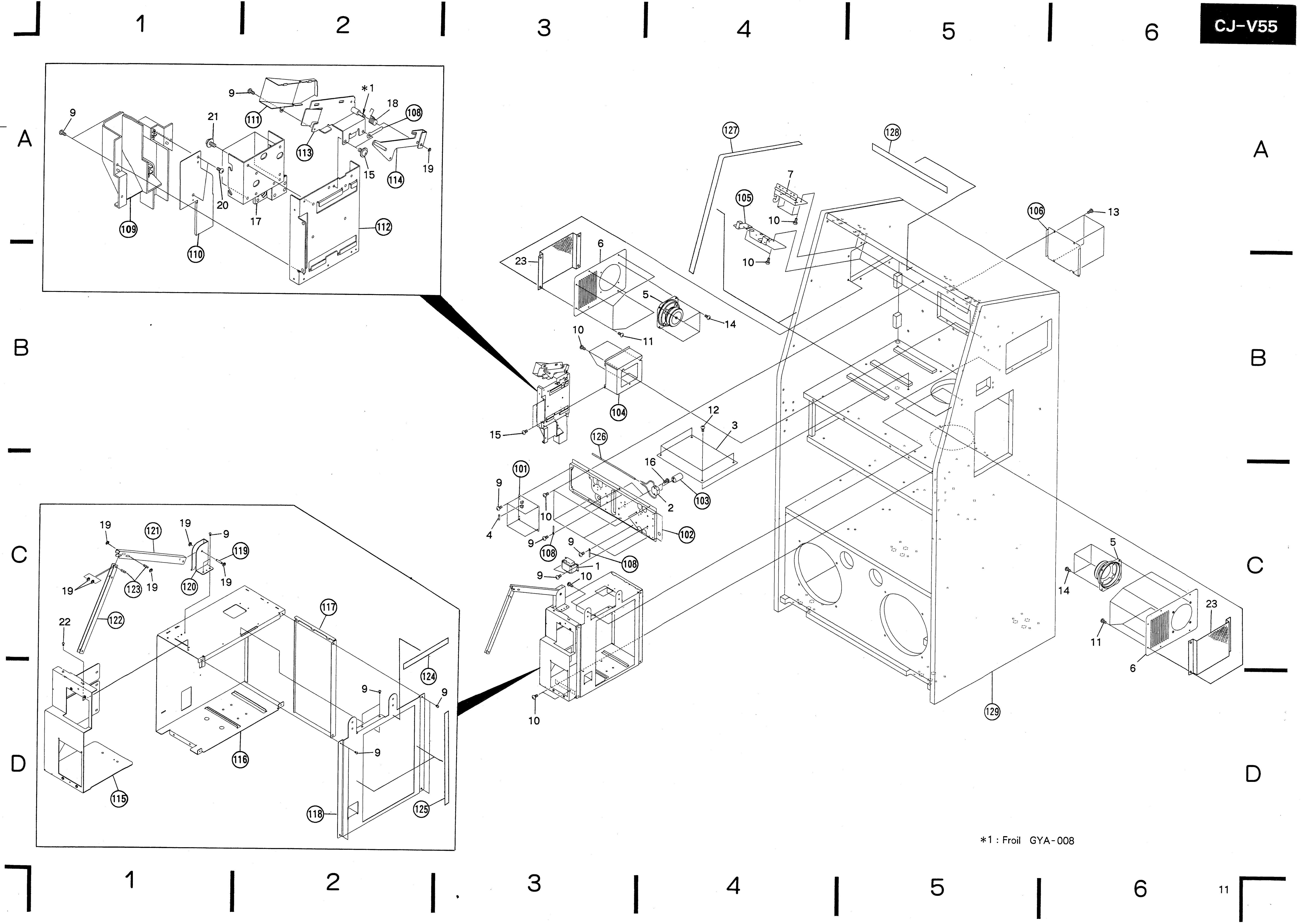
2.1.3 EXTERIOR (3)

Parts List

Mark	No.	Part No.	Description
⚠	1	DTH1114	Ballast
⚠	2	DKK1009	Glow lamp socket
◉	3	SWN1197	Network assembly
⚠	4	DEK1016	Fuse (2A, FU601)
	5	10-757A	Speaker (Mid-range)
	6	SNB1038	Speaker holder
	7	DXB1193	Hinge
	8		• • • • •
	9	BBZ30P060FMC	Screw
	10	DBA1007	Screw (3.5 × 12mm)
	11	TNC35P140FZK	Screw
	12	AYC30P250FMC	Screw
	13	AMZ30P060FZK	Screw
	14	BSZ40P060FZK	Screw
	15	BBZ40P080FMC	Screw
	16	BBZ30P080FMC	Screw
	17	DXB1207	Channel
	18	DBH1035	CA spring
	19	YE30FUC	E ring $\phi 3$
	20	BPZ30P080FCU	Screw
	21	PMB40P080FMC	Screw
	22	AMZ40P080FMC	Screw
	23	SNC1078	Protection net
	101		LAMP
	102		Stay A
	103		Glow lamp
	104		CA holder A
	105		Hinge holder
	106		Rear plate
	107		• • • • •
	108		Cord clamper
	109		Coin guide (A)
	110		Coin guide cover
	111		Insertion guide A
	112		CA holder B
	113		HL holder assembly
	114		CH lever assembly
	115		Bill holder (F)
	116		Bill holder (L)
	117		Bill holder (RE)
	118		Bill holder (R)
	119		DS shaft A
	120		DS base
	121		Door stay A
	122		Door stay B
	123		DS shaft B
	124		Tape C
	125		Tape D
	126		UL tube
	127		Ornament sash
	128		Shield packing (A)
	129		Cabinet



1
2
3
A
B
C
D
9
9
21
111
*1
18
108
113
15
114
19
20
17
109
110
112
23
6
5
10
11
104
15
126
16
101
9
2
10
4
9
108
9
108
1
9
10
10
19
121
19
9
119
19
123
19
120
19
22
122
117
124
9
9
9
116
115
118
125


1
2
3
4
5
6
A
B
C
D
9
9
*1
18
108
21
111
113
15
114
19
20
17
109
110
112
127
128
7
105
10
10
106
13
23
6
5
14
11
10
104
15
12
3
126
16
103
101
9
10
2
102
4
9
108
9
108
1
9
10
10
129
5
14
11
6
23
19
121
19
9
119
19
123
19
120
19
22
122
117
124
9
9
115
116
9
118
125

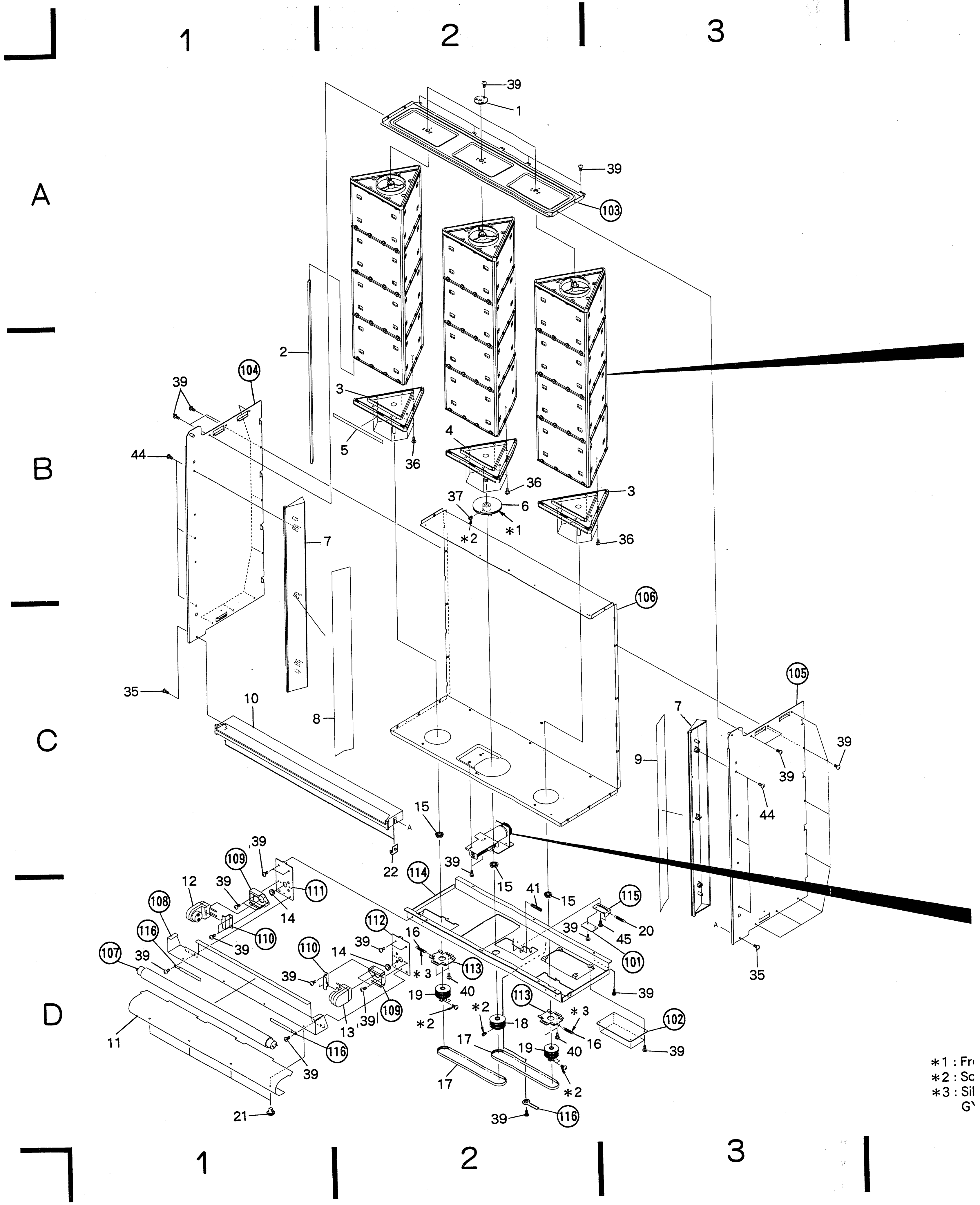
*1 : Froil GYA-008

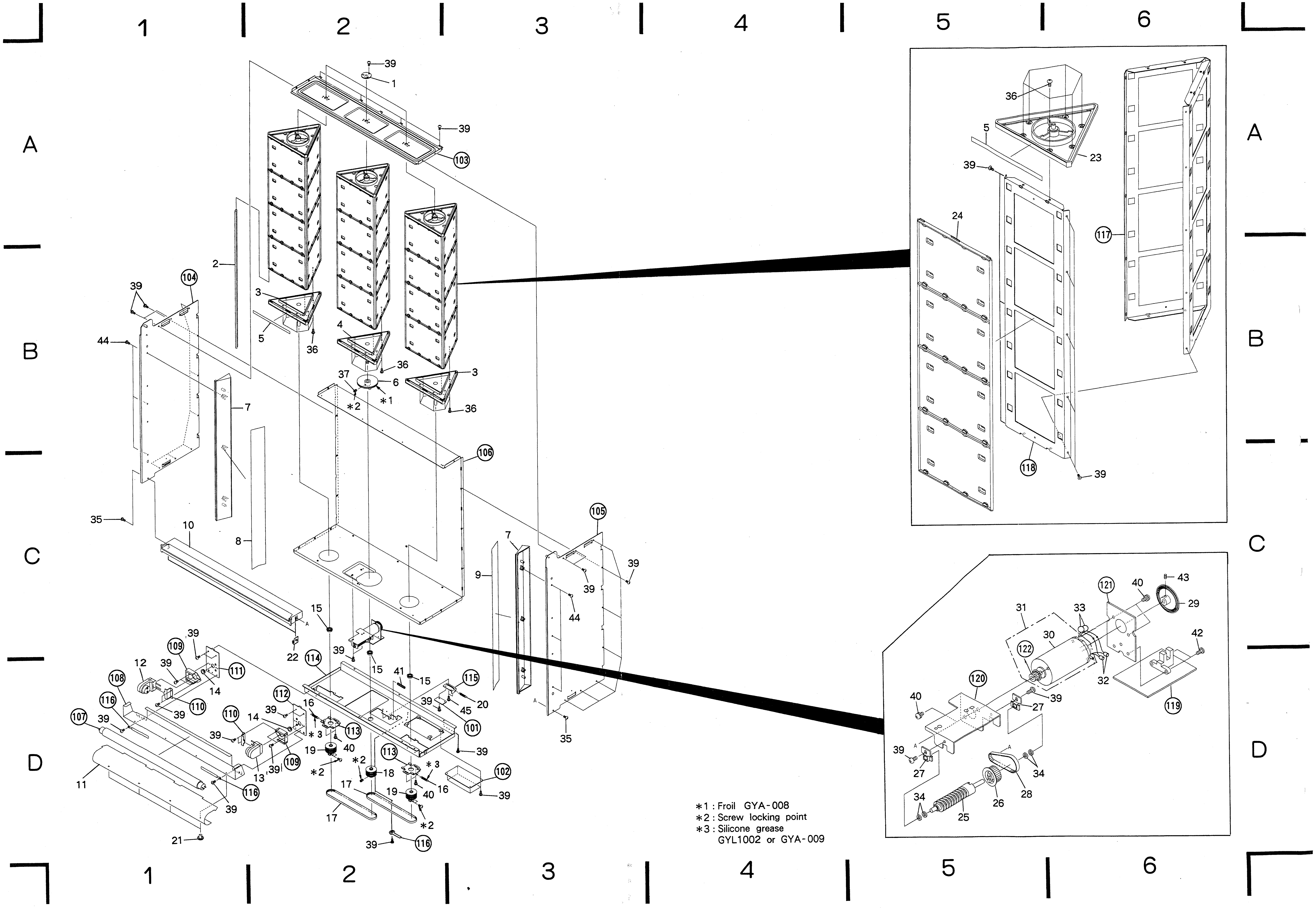
2.1.4 MENU BOARD SECTION

Parts List

Mark	No.	Part No.	Description
	1	DNK1633	Shaft holder
	2	DNF1257	Corner edge
	3	DNK1629	Menu cap (L)
	4	DNK1630	Menu cap (M)
	5	DEC1252	Menu sheet
	6	DNK1621	Worm wheel
	7	DNK1626	Side ornament plate
	8	DEC1250	Side ornament plate sheet (L)
	9	DEC1251	Side ornament plate sheet (R)
	10	DNK1627	Ornament plate
	11	DEC1224	Illumination sheet
	12	DKK1006	Fluorescent lamp socket (upper L)
	13	DKK1007	Fluorescent lamp socket (under R)
	14	DEC1220	Bushing
	15	DXB-108	Bearing
	16	DBH1107	Tension spring (under)
	17	DMS1012	Synchro belt
	18	DNK1622	Center pulley
	19	DNK1623	Synchro pulley
	20	DBH1108	Adjustment spring
	21	DEC-176	Plastic rivet
	22	VBN-002	Speed nut
	23	DNK1632	Menu cap (U)
	24	DNK1628	Menu
	25	DLA1300	Worm gear
	26	DNK1620	Pulley
	27	DNK1624	Worm shaft holder
	28	DMS1006	S2M timing belt
	29	DXB1160	Encoder disc assembly
	30	DXM1033	Motor
	31	DXX1368	Motor assembly
	32	CEANP010M50	C702,C704
	33	CGDYX104M25	C701,C703
	34	WA42D080D050	Washer
	35	BBZ30P080FZK	Screw
	36	BBZ40P080FMC	Screw
	37	ZMD40H080FBT	Screw
	38	SMZ30H120FBT	Screw
	39	BBZ30P060FMC	Screw
	40	PMH30P060FMC	Screw
	41	SMZ30H200FMC	Screw
	42	VBZ26P060FMC	Screw
	43	ZMD26H030FBT	Screw
	44	BBZ30P080FCU	Screw
	45	AMZ30P060FZK	Screw

Mark	No.	Part No.	Description
	101		POSS
	102		ROTA
	103		Top cover
	104		Side frame (L)
	105		Side frame (R)
	106		Back frame
	107		Fluorescent lamp
	108		Reflection plate
	109		Socket holder (L)
	110		Socket holder (S)
	111		Lamp plate (L)
	112		Lamp plate (R)
	113		Tension plate (under)
	114		Under frame
	115		Adjustment plate
	116		Cord clamper
	117		Triangle frame (L)
	118		Triangle frame (S)
	119		CNTB
	120		Motor holder
	121		Sensor holder
	122		Motor pulley


1
2
3
A
B
C
D
39
1
39
103
2
104
39
3
5
36
4
36
44
37
6
*2
*1
3
36
7
106
105
35
10
8
9
7
39
39
44
15
22
39
109
12
39
111
14
108
110
114
15
41
15
115
39
20
45
101
116
39
107
11
110
112
16
39
14
39
113
*3
40
19
*2
*2
18
113
*3
16
102
39
39
109
13
39
116
17
19
40
17
*2
21
39
116
39
35
*1 : Fr
*2 : Sc
*3 : Sil
G

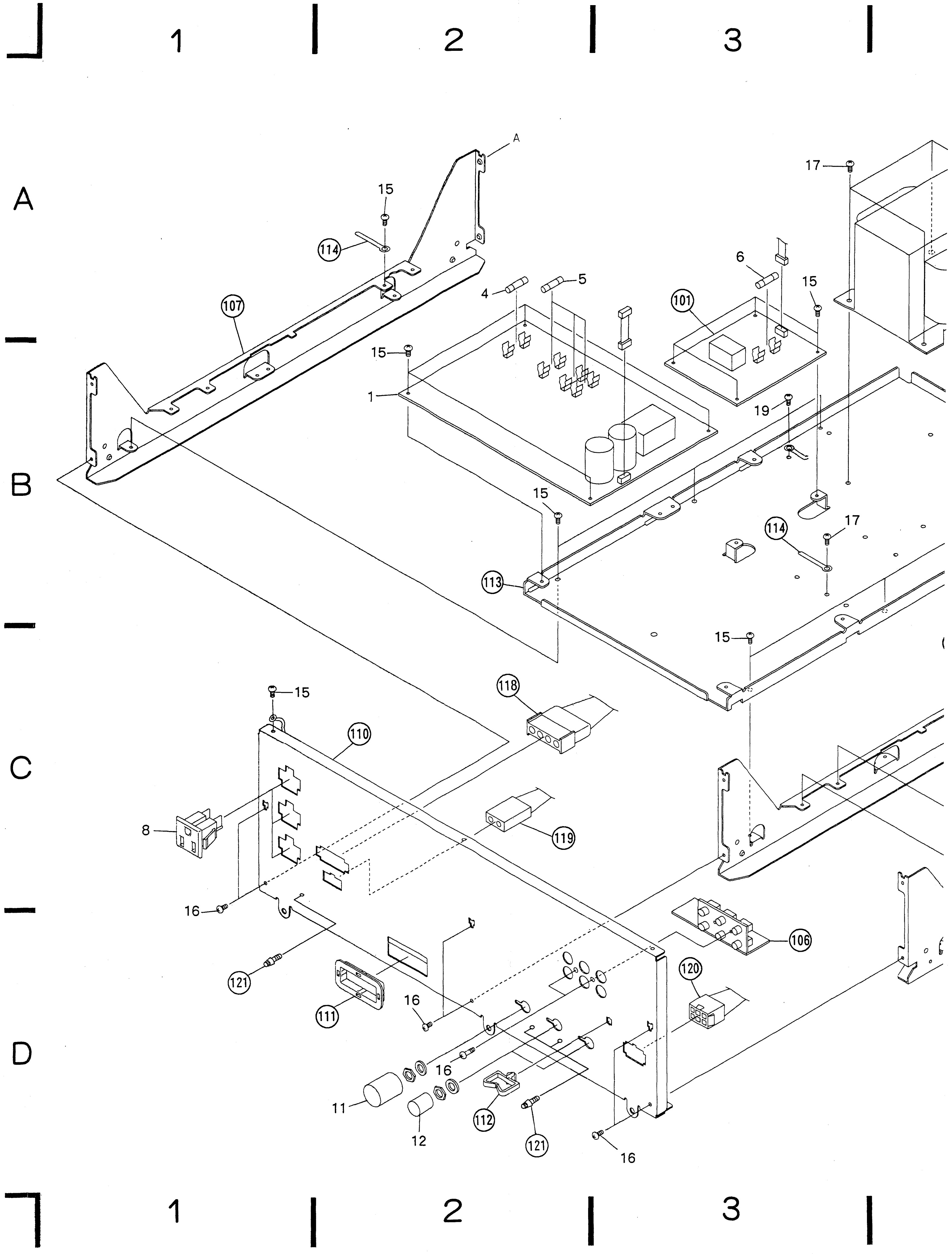

1
2
3
4
5
6
A
B
C
D
39
1
103
104
44
35
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
40
41
42
43
44
45
101
102
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
*1
*2
*3
A

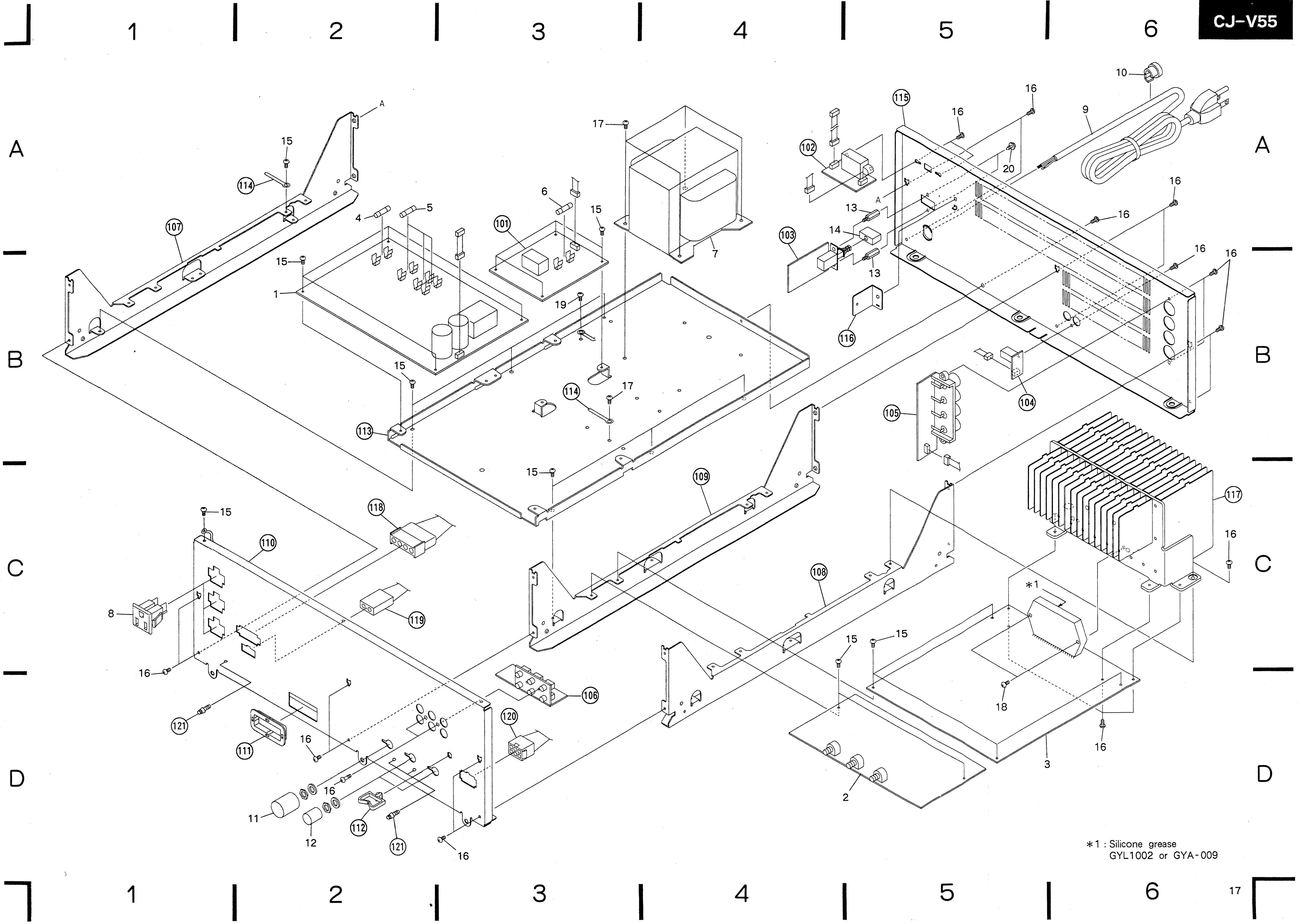
*1 : Froil GYA-008
*2 : Screw locking point
*3 : Silicone grease
GYL1002 or GYA-009

2.1.5 AMP SECTION

Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
◉	1	DWR1056	POWB		101		ACIN
	2	DWK1011	PREB		102		ASEL
	3	DWH1007	PAMP		103		PSWB
⚠	4	DEK1011	Fuse (1A, FU1)		104		LOJB
⚠	5	DEK1015	Fuse (1.6A, FU2-FU4)		105		SPTB
⚠	6	DEK1022	Fuse (6A, FU5)		106		CDJB
⚠	7	DTT1039	Power transformer (120V)		107		Side frame L
⚠	8	DKN-108	AC outlet		108		Side frame R
⚠	9	DDG1025	AC power cord		109		Center frame
⚠	10	VEC-201	Strain relief		110		Front panel A
	11	RAC1210	VR knob A		111		Protector
	12	RAC1211	VR knob B		112		Wire clip
	13	DLA-177	Staddle		113		Transformer frame
	14	DAC1107	Push knob		114		Cord clamper
	15	BBZ30P060FMC	Screw		115		Rear panel A
	16	BBZ30P080FZK	Screw		116		P.C.B. stopper
	17	BBZ40P080FMC	Screw		117		Heat sink
	18	BBZ30P140FMC	Screw		118		Connector assembly
	19	PMB40P080FMC	Screw		119		Connector assembly
	20	AMZ30P060FZK	Screw		120		Connector assembly
					121		Earth terminal


1
2
3
A
B
C
D
A
15
114
107
17
6
15
101
4
5
15
1
19
15
114
17
113
15
15
118
110
8
119
16
106
121
111
16
120
16
11
12
112
121
16
1
2
3

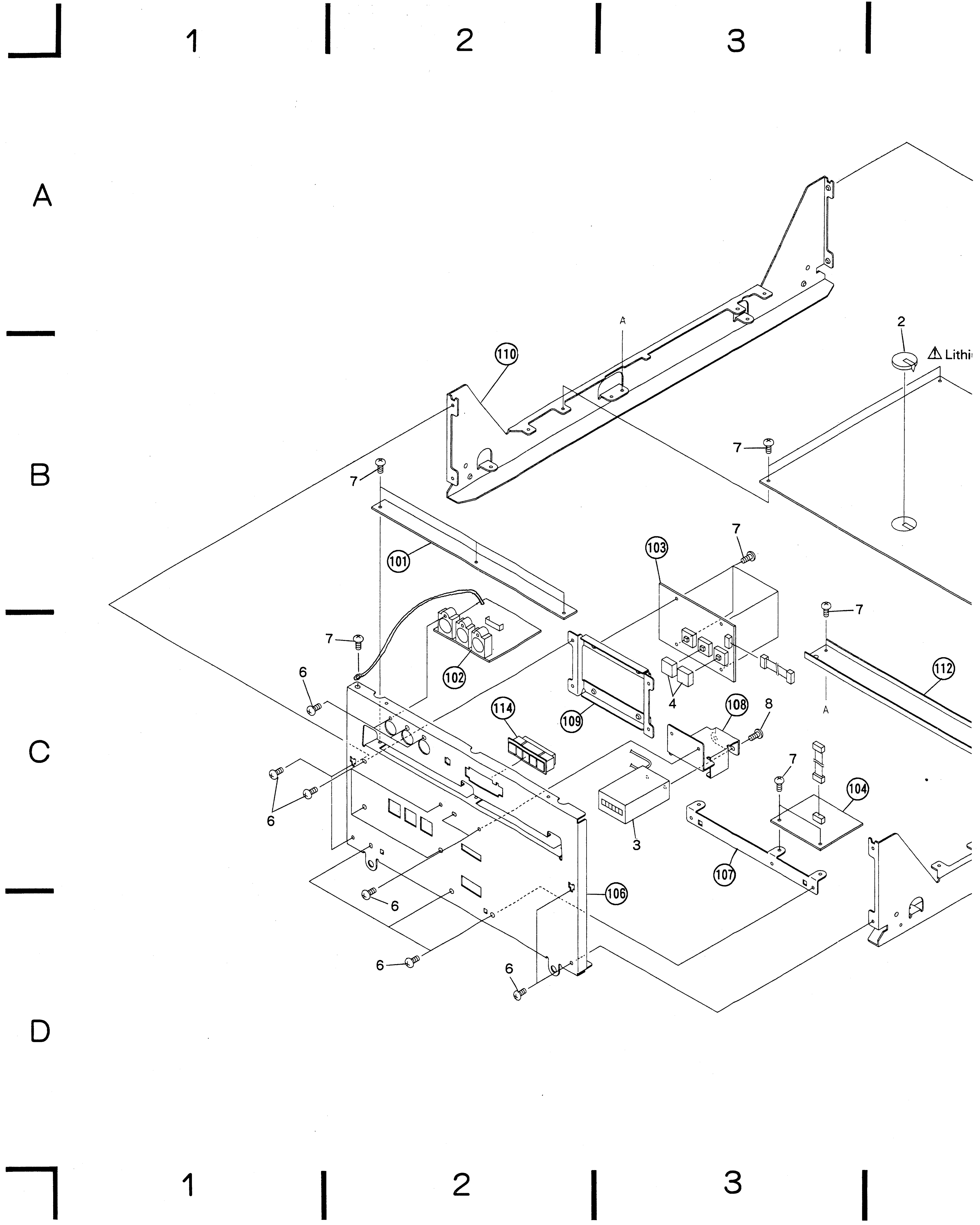

1
2
3
4
5
6
A
B
C
D
A
107
114
15
101
1
4
5
6
15
17
7
19
113
114
17
15
102
115
16
16
20
9
10
13
14
103
13
116
104
105
109
117
118
110
8
119
16
121
111
106
120
12
11
112
121
16
108
15
15
18
2
3
16
*1

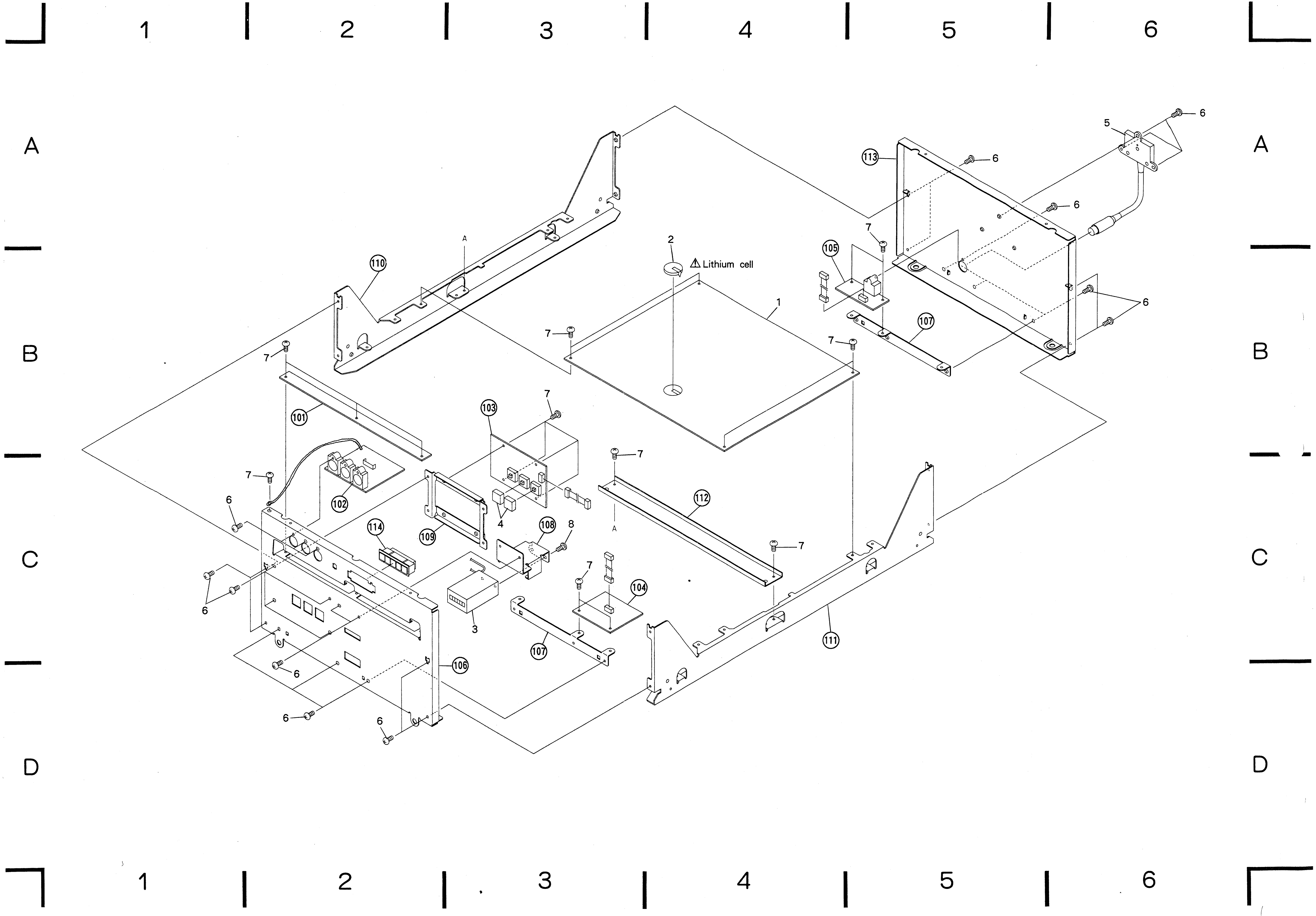
*1 : Silicone grease
GYL1002 or GYA-009

2.1.6 COMMANDER SECTION

Parts List

Mark	No.	Part No.	Description
◉	1	DWG1138	CONT
⚠	2	DEM1001	Lithium cell
	3	DAW1011	Electromagnetic counter
	4	DAC-116	Push button
	5	DXR1007	Remote control unit
	6	BBZ30P080FZK	Screw
	7	BBZ30P060FMC	Screw
	8	PMB30P050FCU	Screw
	101		CNNB
	102		CRJB
	103		OPER
	104		DIPS
	105		RMJB
	106		Front panel B
	107		Terminal holder
	108		Counter holder
	109		P.C.B. holder
	110		Side frame L
	111		Side frame R
	112		Reinforced frame
	113		Rear panel B
	114		Connector assembly

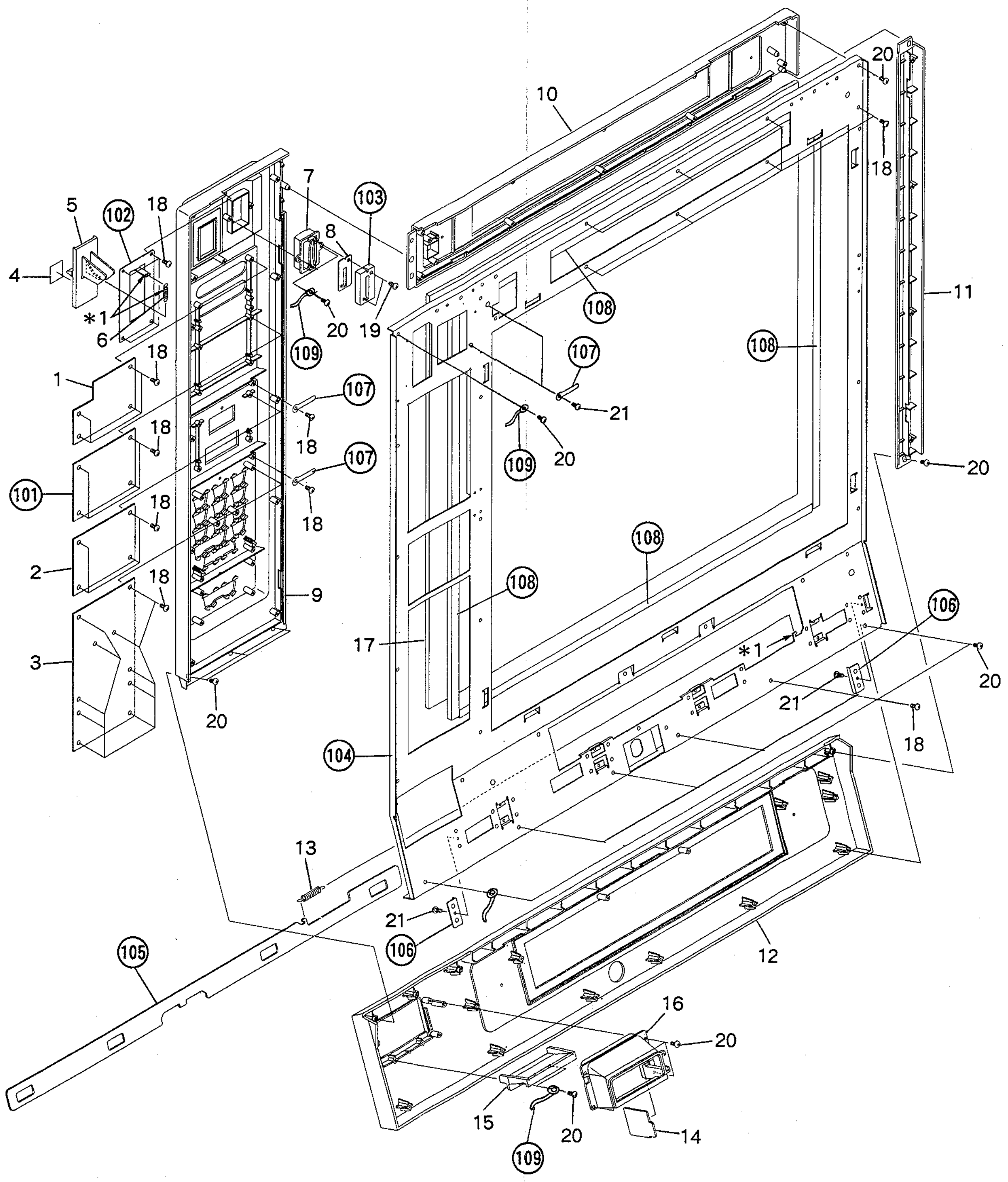

1
2
3
A
B
C
D
110
A
2
⚠ Lithi
7
7
101
103
7
7
102
6
112
114
109
4
108
8
A
7
6
104
3
6
107
106
6
6
6
1
2
3


A
B
C
D
⚠ Lithium cell
A

2.1.7 TOP DOOR SECTION

Parts List

Mark	No.	Part No.	Description
◉	1	DWG1128	MESS
◉	2	DWG1129	DISP
◉	3	DWS1101	KEYB
	4	DAH1184	Coin-return lever sheet B
	5	DAD1001	Coin-return lever
	6	DBH1033	Coin-return lever spring
	7	DNS1044	Coin insertion hole
	8	DNH1332	Coin slit
	9	DNK1609	Operation panel
	10	DNK1610	Top door panel (upper)
	11	DNK1612	Top door panel (side)
	12	DNK1611	Top door panel (under)
	13	DBH1034	Lock spring
	14	DEC1215	Transparent panel
	15	DNS1084	Bill insertion hole
	16	DNK1613	Bill insertion panel
	17	DAN1010	Menu glass
	18	BPZ30P080FCU	Screw
	19	PMH30P120FMC	Screw
	20	IPZ30P080FMC	Screw
	21	BBZ30P060FMC	Screw
	101		BRAN
	102		Coin-return lever fixing plate
	103		Coin spacer
	104		Top door base
	105		Top door lock plate
	106		Lock plate stopper
	107		Cord clamper
	108		Glass sash
	109		Earth lug assembly

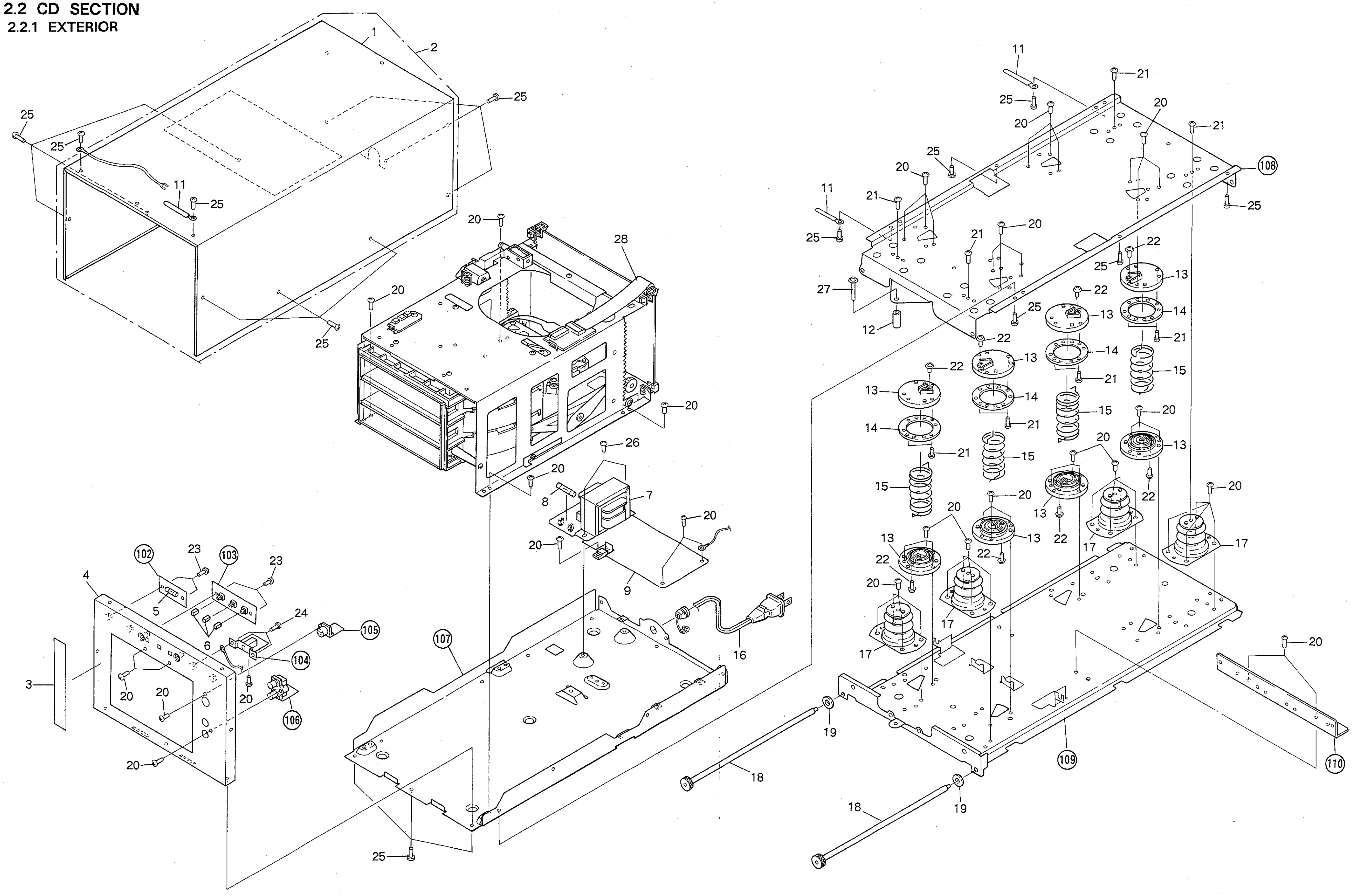


10
20
18
11
5
(102)
18
7
(103)
8
4
*1
6
20
19
(108)
(109)
(107)
21
(108)
1
18
(107)
18
(109)
20
20
(101)
18
(107)
18
2
18
(108)
(108)
9
3
17
(106)
*1
20
21
20
18
(104)
13
21
(106)
(105)
12
16
20
15
20
14
(109)

*1 : Silicone Adhesive GYL-014

2.2 CD SECTION

2.2.1 EXTERIOR


1
2
3
4
5
6
7
8
9
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
102
103
104
105
106
107
108
109
110

Parts List

Mark	No.	Part No.	Description
	1	DNE1083	Bonnet
	2	DXX1357	Bonnet assembly
	3	DRW1151	Label A
	4	DNB1012	Front panel
	5	VCX-006	Hour meter
	6	DAC1196	Push button
⚠	7	DTT1037	Power transformer (T201)
⚠	8	REK-075	Fuse (FU201, 315mA)
◉	9	DWX1117	ANLG
	10	DEC-176	Plastic rivet
	11	RNH-184	Cord clamper
	12	DLA1336	Coller
	13	DNK1179	SP holder
	14	DNF1075	Plate B
	15	DBH1105	Spring
⚠	16	DDG1026	AC power cord
	17	DEB1106	Air damper
	18	DLA1337	Lock shaft
	19	DEB1123	Rubber washer
	20	BBZ30P080FMC	Screw
	21	PMZ30P040FMC	Screw
	22	IPZ30P060FMC	Screw
	23	AMZ30P060FMC	Screw
	24	PMZ30P060FMC	SCrew
	25	PDZ30P050FMC	Screw
	26	BBZ40P080FMC	Screw
	27	AMZ40P250FMC	Screw
	28	DDD1027	17P flexible cord

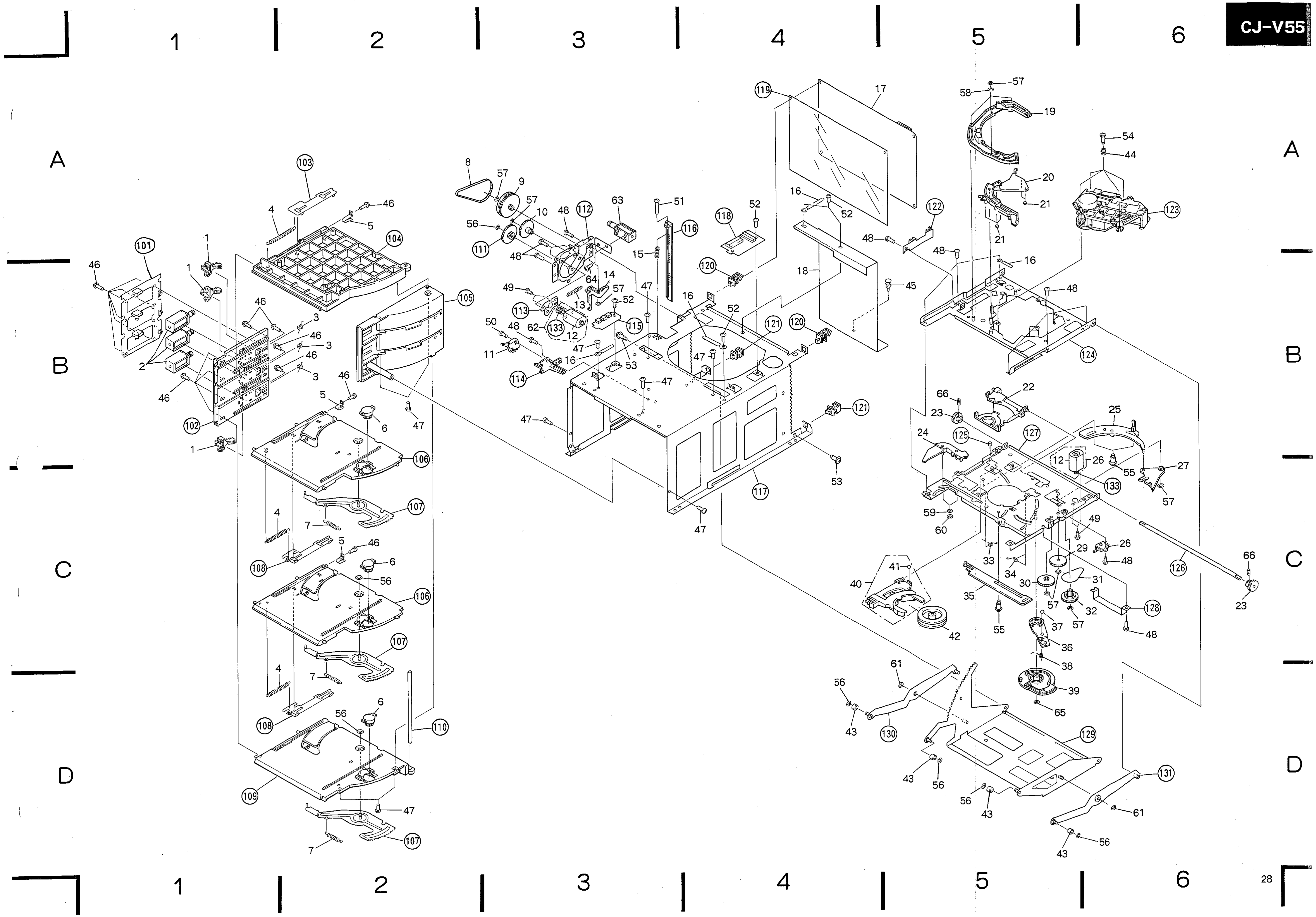
Mark	No.	Part No.	Description
	101		Insulation plate B
	102		HRMB
	103		EKEY
	104		RMJB
	105		DJAK
	106		PJAK
	107		Chassis
	108		Upper base
	109		Under base
	110		Sipping angle

2.2.2 MECHANISM SECTION

Parts List

Mark	No.	Part No.	Description
	1	DNK1566	Lock lever
	2	DXP1008	Plunger
	3	DBH1101	Lock spring
	4	PBH1015	SM spring
	5	DBK1028	Spring
	6	PXC-016	Damper assembly
	7	PBH-465	Eject spring
	8	DMS1011	Timing belt
	9	DNK1578	Timing pulley
	10	DNK1575	Gear E2
	11	DSH1011	Slide switch
	12	PXM1002	Motor (SELECT, LOADING)
	13	DBH1100	Select spring
	14	DNK1579	Select lever
	15	DBH1102	Sensor spring
	16	RNH-184	Cord clamper
	17	DWX1116	DEGT
	18	DEC1237	Sheet
	19	PNW1110	Cam
	20	PNW1111	Upper tray
	21	PED1001	Cushion A
	22	DNK1581	Clamper holder B
	23	DNS1080	Synchro gear
	24	DNK1577	Turn drive lever
	25	DNK1574	Clamper cam
	26	PYY1025	Motor assembly
	27	DNK1573	Clamper lever
	28	DSK1001	Lever switch
	29	DNK1569	Gear A
	30	DNK1570	Gear B
	31	DEB1104	Belt
	32	PNW1095	Gear pulley
	33	PBH1016	Clamper spring T
	34	DBH1120	Clamper spring B
	35	DNK1572	Drive plate
	36	DNK1571	Drive lever
	37	PBP-001	Steel ball φ 4
	38	DBH1103	Tension spring
	39	DNK1568	Main gear
	40	PNW1107	Clamper holder T
	41	PBP-009	Steel ball φ 3
	42	PNW1448	Clamper
	43	DLA1286	Roller
	44	PEB1014	Floating rubber
	45	DEC-176	Plastic rivet
	46	BPZ20P080FZK	Screw
	47	BPZ30P100FMC	Screw
	48	BSZ26P040FMC	Screw
	49	PMZ20P030FMC	Screw
	50	PMZ20P080FMC	Screw

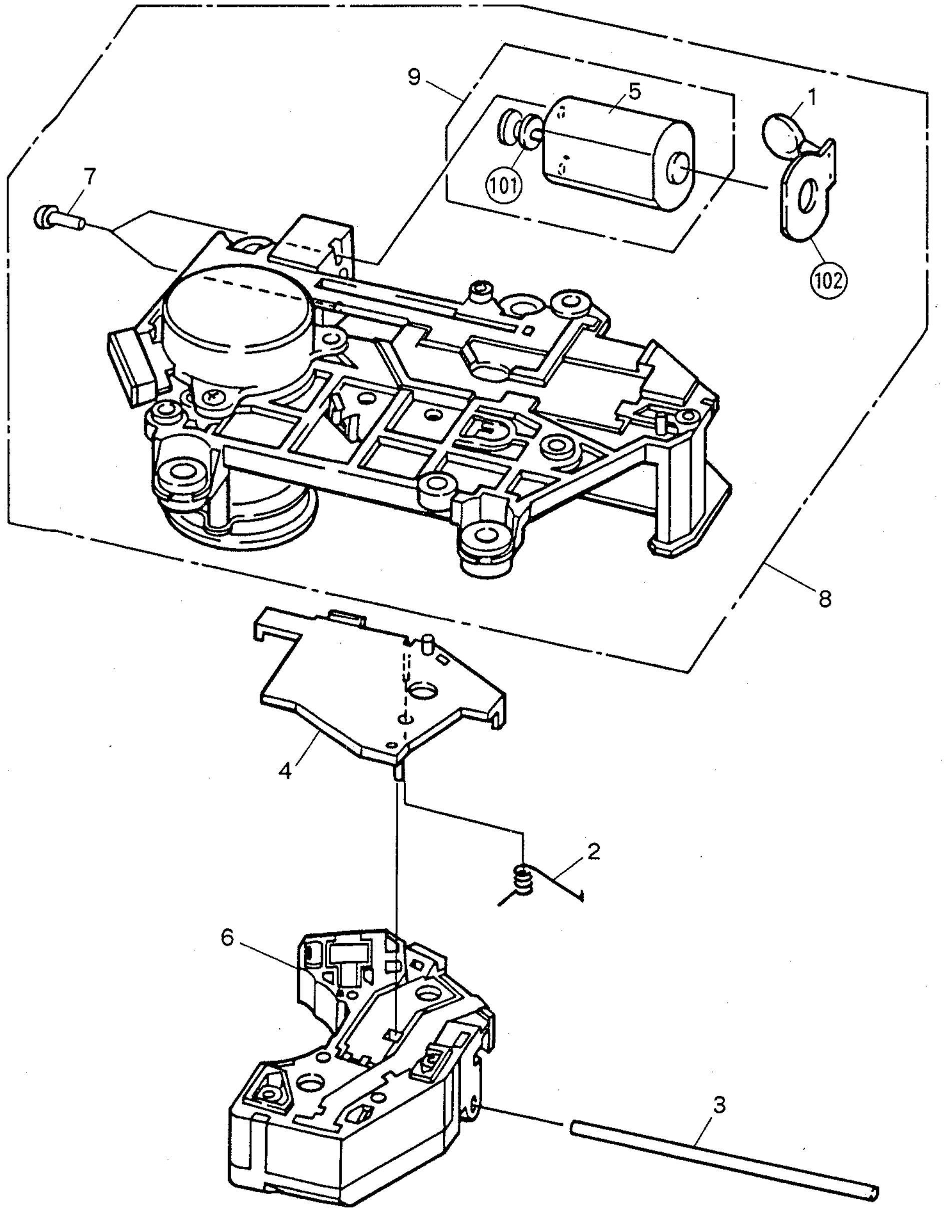
Mark	No.	Part No.	Description
	51	BMZ26P120FMC	Screw
	52	PCZ30P050FZK	Screw
	53	DBA1023	Link screw
	54	PBA1002	Floating screw
	55	PBA-125	Screw
	56	WT26D047D050	Washer
	57	WT26D047D025	Washer
	58	WA31D054D050	Washer
	59	WA31D054D025	Washer
	60	YE25FUC	E ring
	61	WT31D054D050	Washer
	62	DXX1358	Select motor assembly
	63	DXP1009	Plunger
	64	BMZ26P030FMC	Screw
	65	WT31D054D025	Washer
	66	ZMD26H040FBT	Screw
	101		MJSW
	102		Side guide L
	103		SM select A
	104		Top guide
	105		Side guide R
	106		Center guide
	107		Eject lever
	108		SM select B
	109		Bottom guide
	110		Guide bar
	111		Gear EF
	112		Gear angle
	113		Motor base
	114		Sensor holder
	115		REJC
	116		Sensor plate
	117		Main chassis
	118		FREC
	119		Insulation plate A
	120		Card edge spacer
	121		Corner post
	122		SENS
	123		Servo mechanism assembly
	124		Upper chassis
	125		Rubber tube
	126		Synchro shaft
	127		Sub chassis
	128		Hold plate
	129		Link plate
	130		Link L
	131		Link R
	132		Motor pulley
	133		Motor pulley


A
B
C
D

2.2.3 SERVO MECHANISM SECTION

Parts List

Mark	No.	Part No.	Description
	1	CGDYX104M25	Semiconductive ceramic capacitor
	2	PBH1008	Drive spring
	3	PLA1004	Guide bar
	4	PNW1063	Carriage plate
	5	PXM1002	Motor
	6	PWY1009	Pickup assembly
	7	PMZ20P030FMC	Screw
	8	DXX1361	Spindle motor assembly
	9	PYY1025	Motor assembly
	101		Motor pulley
	102		Carriage M·board

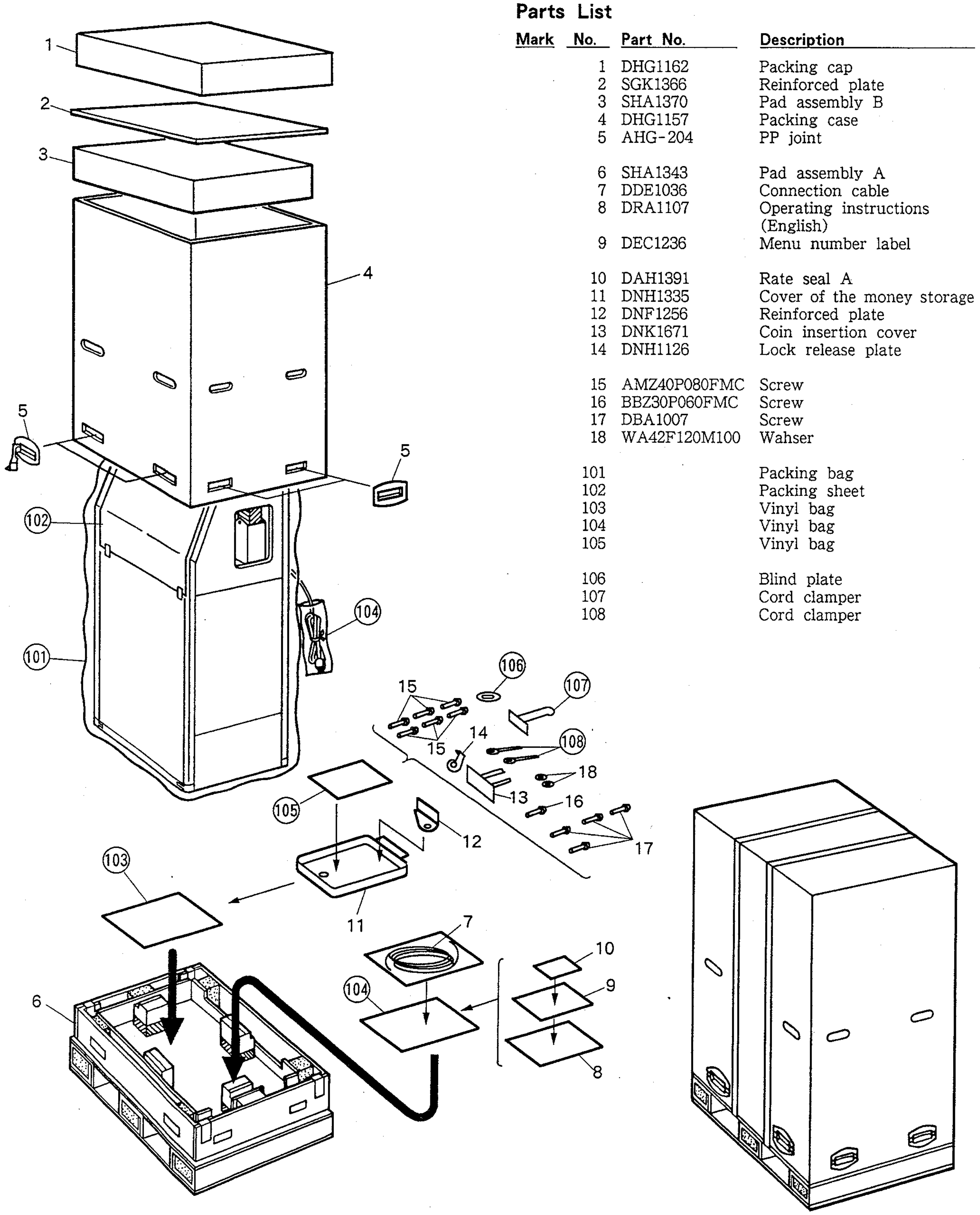


3. PACKING

3.1 MAIN SECTION

Parts List

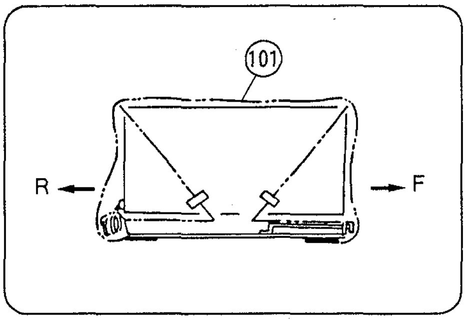
Mark	No.	Part No.	Description
	1	DHG1162	Packing cap
	2	SGK1366	Reinforced plate
	3	SHA1370	Pad assembly B
	4	DHG1157	Packing case
	5	AHG-204	PP joint
	6	SHA1343	Pad assembly A
	7	DDE1036	Connection cable
	8	DRA1107	Operating instructions (English)
	9	DEC1236	Menu number label
	10	DAH1391	Rate seal A
	11	DNH1335	Cover of the money storage
	12	DNF1256	Reinforced plate
	13	DNK1671	Coin insertion cover
	14	DNH1126	Lock release plate
	15	AMZ40P080FMC	Screw
	16	BBZ30P060FMC	Screw
	17	DBA1007	Screw
	18	WA42F120M100	Wahser
	101		Packing bag
	102		Packing sheet
	103		Vinyl bag
	104		Vinyl bag
	105		Vinyl bag
	106		Blind plate
	107		Cord clamper
	108		Cord clamper



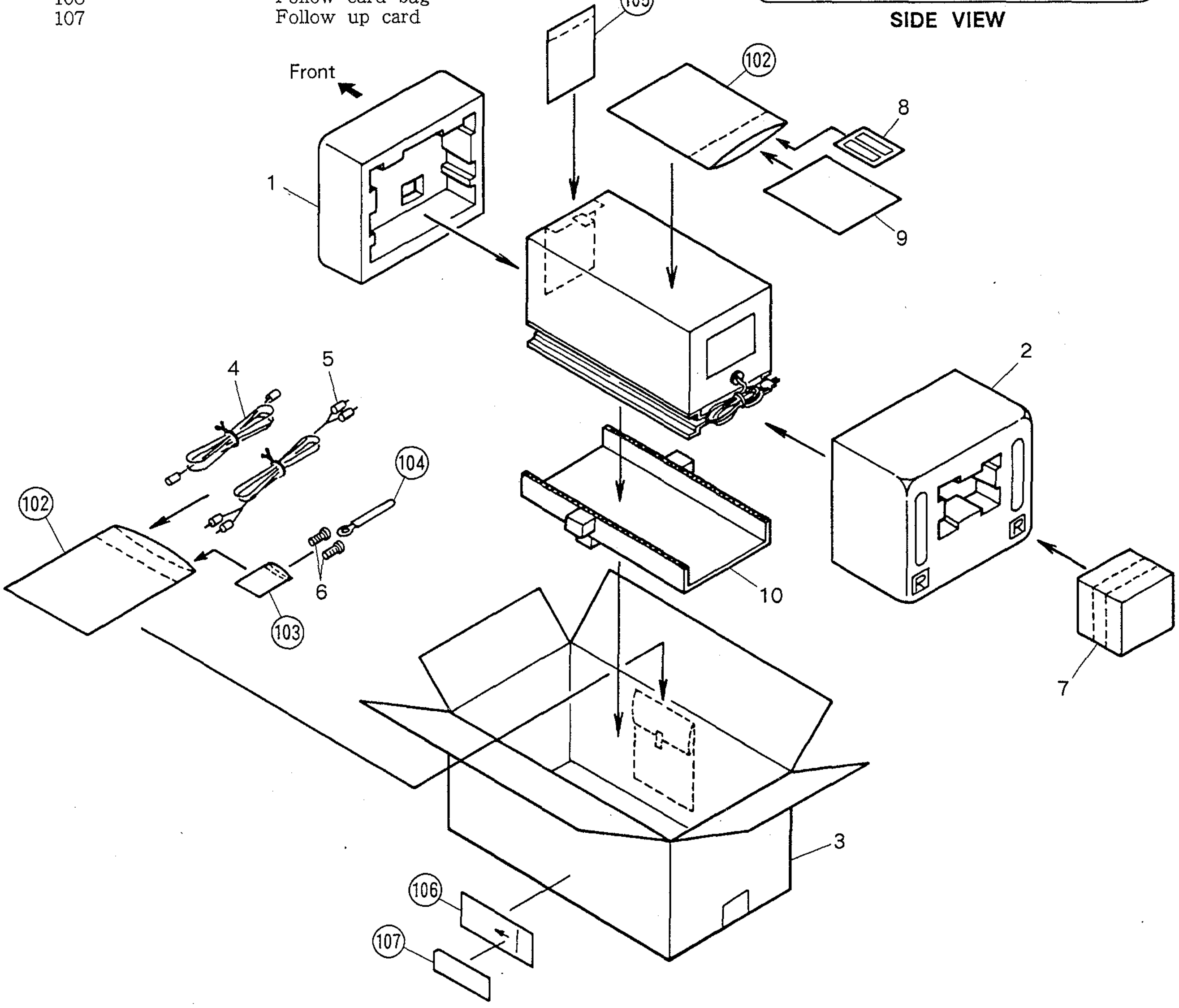
3.2 PACKING OF PD-MV55

Parts List

Mark	No.	Part No.	Description
	1	DHA1086	F pad
	2	DHA1087	R pad
	3	DHG1172	Packing case
	4	DDE1034	Connection cord
	5	PDE1065	Connection cord with pin plug
	6	AMZ40P080FMC	Screw
	7	DHG1164	Case
	8	DRW1156	Label B
	9	DRB1027	Operating instructions (English)
	10	DHC1015	Reinforcement plate
	101		Packing sheet
	102		Vinyl bag
	103		Vinyl bag
	104		Cord clamper
	105		Caution label
	106		Follow card bag
	107		Follow up card



SIDE VIEW


105
Front
102
8
1
9
4
5
2
104
102
6
10
R
R
103
7
3
106
107

4. SCHEMATIC DIAGRAMS AND P. C. BOARDS PATTERN

1. RESISTORS :
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
   Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT :
   ▭ ; DC voltage (V) at play state.
   ⇦mA ; DC current at play state.
   Value in ( ) is DC current at stop state.

4. OTHERS :
   ➡ ; Signal route.
   ⊘ ; Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

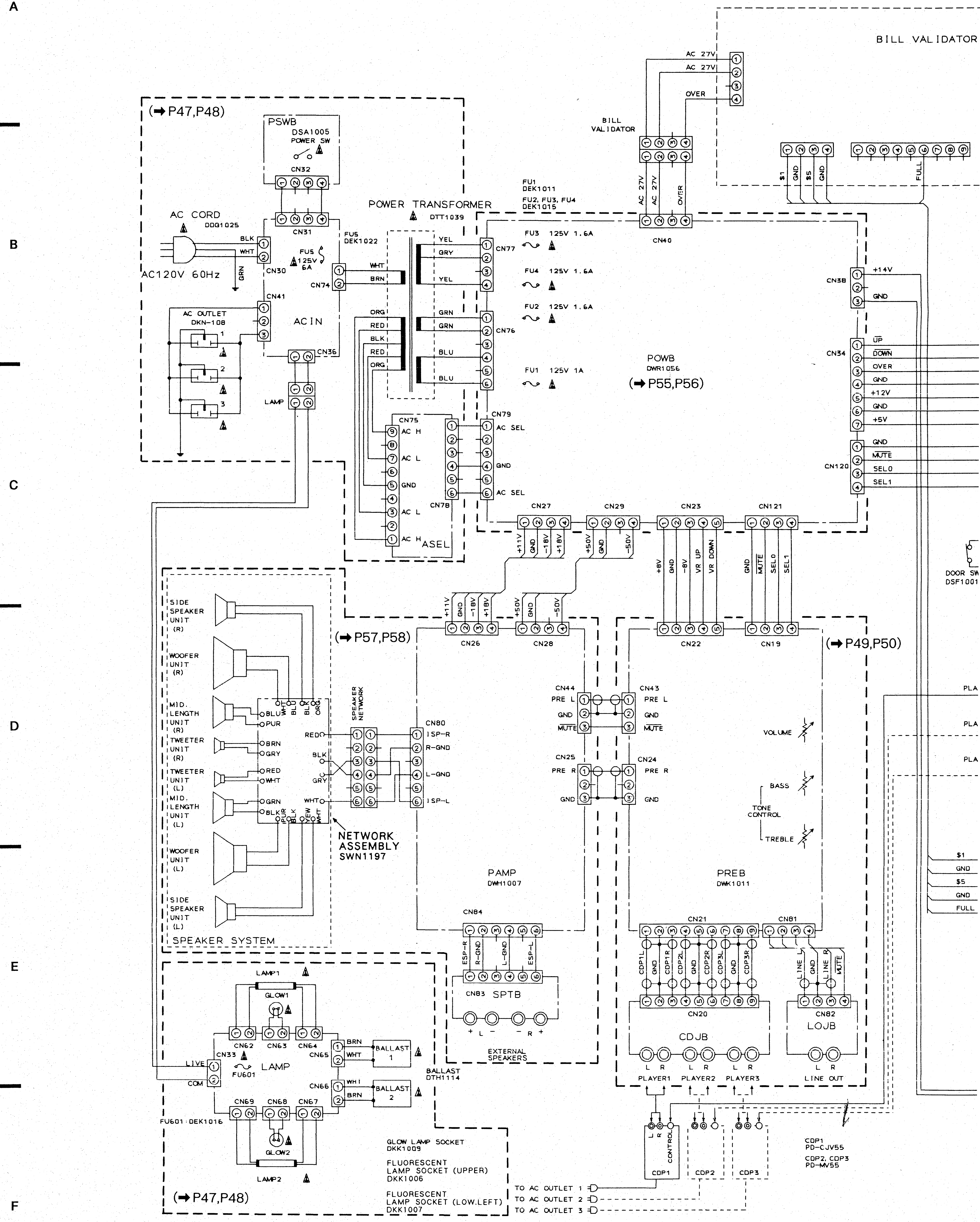
5. SWITCHES : (The underlined indicates the switch position)

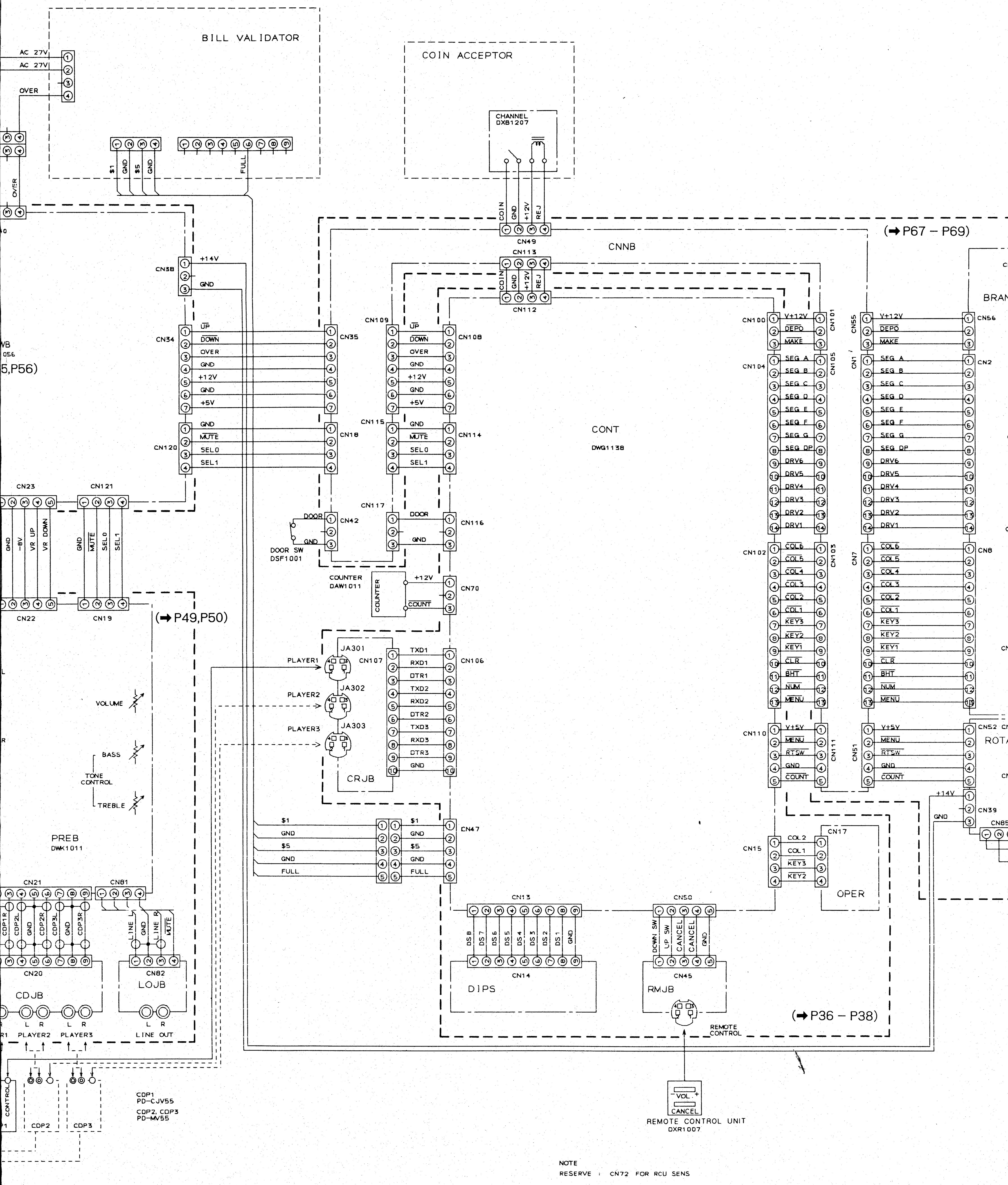
MAIN SECTION
OUTSIDE OF P.C.BOARDS
  DOOR SW
KEYB
  S301 : 1
  S302 : 2
  S303 : 3
  S304 : 4
  S305 : 5
  S306 : 6
  S307 : 7
  S308 : 8
  S309 : 9
  S310 : 0
  S311 : ⎤ CLEAR
  S312 : ⎦
  S313 : ⎤ BEST HITS
  S314 : ⎦
  S315 : ⎤ ROTATE MENU
  S316 : ⎦
ASEL
  SPEAKER SELECTOR SW
  BUILT-IN AND EXTERNAL SPEAKERS —— BUILT-IN SPEAKERS ONLY
PSWB
  POWER SW ON — OFF
OPER
  S301 : MEMORY CLEAR
  S302 : MENU ROTATION
  S303 : SERVICE MODE
DIPS
  S1 : FUNCTION

CD SECTION
OUT SIDE OF P.C.BOARDS
  DOWN LIMIT TRAY SW
  CLAMP SW
  IN SIDE SW
EKEY
  S301 : A ⎤
  S302 : B ⎥ EJECT
  S303 : C ⎦
SENS
  S901 : UP LIMIT
MJSW
  S801 : 1 ⎤
  S802 : 2 ⎥ MJ LOCK
  S803 : 3 ⎦
  S804 : 1 ⎤
  S805 : 2 ⎥ MJ SENS
  S806 : 3 ⎦

4.1 MAIN SECTION

4.1.1 OVERALL CONNECTION DIAGRAM

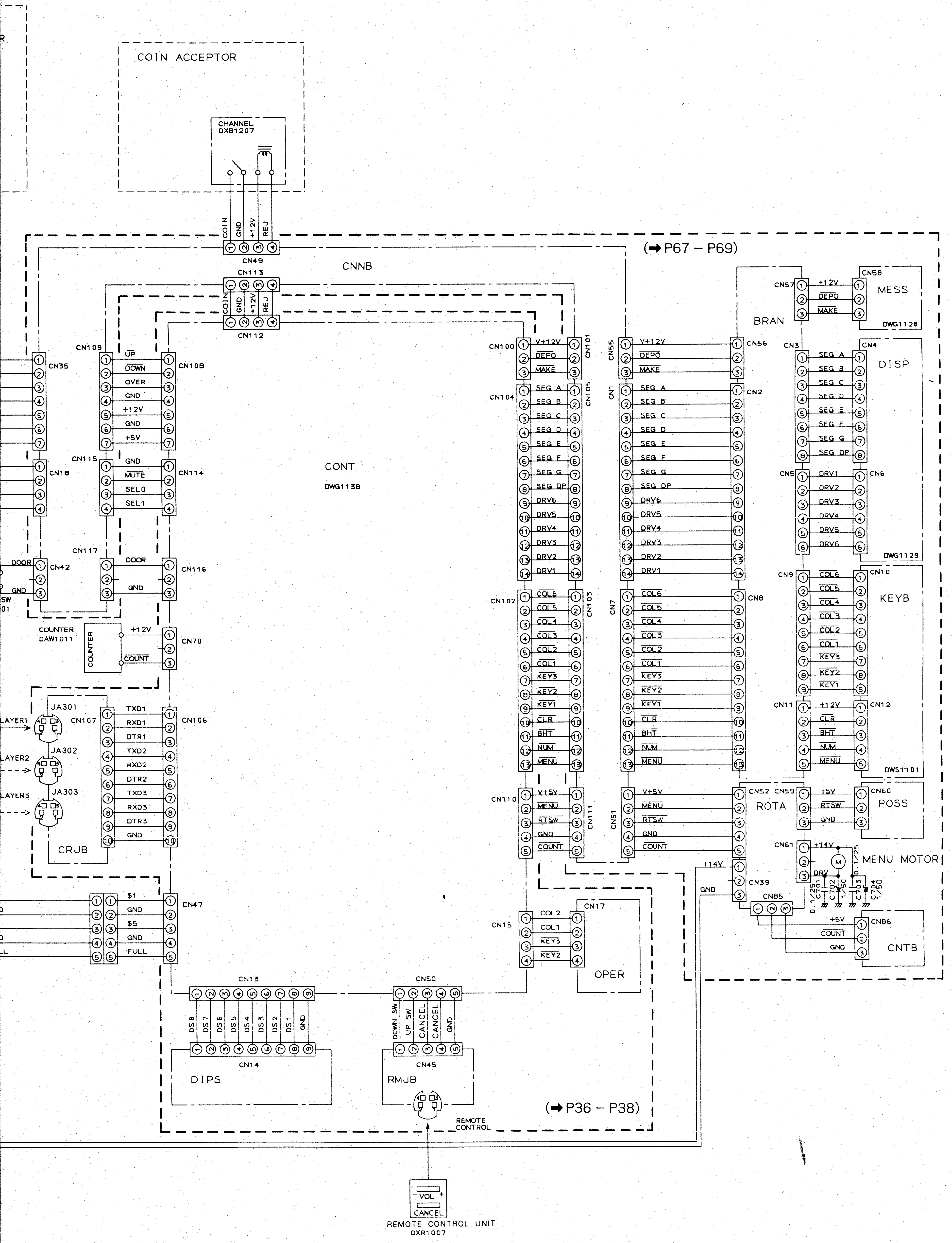

A
B
C
D
E
F
BILL VALIDATOR
AC 27V
AC 27V
OVER
BILL VALIDATOR
$1
GND
$5
GND
FULL
(➡ P47,P48)
PSWB
DSA1005
POWER SW
CN32
CN31
AC CORD
DDG1025
BLK
WHT
GRN
AC120V 60Hz
CN30
CN41
AC OUTLET
DKN-108
1
2
3
AC IN
CN36
LAMP
FU5
DEK1022
FU5
125V
6A
CN74
WHT
BRN
POWER TRANSFORMER
DTT1039
YEL
GRY
YEL
ORG
RED
BLK
RED
ORG
GRN
GRN
BLU
BLU
FU1
DEK1011
FU2, FU3, FU4
DEK1015
CN40
CN77
CN76
FU3 125V 1.6A
FU4 125V 1.6A
FU2 125V 1.6A
FU1 125V 1A
POWB
DWR1056
(➡ P55,P56)
CN38
+14V
GND
CN34
UP
DOWN
OVER
GND
+12V
GND
+5V
CN120
GND
MUTE
SEL0
SEL1
CN75
AC H
AC L
GND
AC L
AC H
CN78
ASEL
CN79
AC SEL
GND
AC SEL
CN27
+11V
GND
-18V
+18V
CN29
+50V
GND
-50V
CN23
+8V
GND
-8V
VR UP
VR DOWN
CN121
GND
MUTE
SEL0
SEL1
DOOR SW
DSF1001
SIDE SPEAKER UNIT (R)
WOOFER UNIT (R)
MID. LENGTH UNIT (R)
TWEETER UNIT (R)
TWEETER UNIT (L)
MID. LENGTH UNIT (L)
WOOFER UNIT (L)
SIDE SPEAKER UNIT (L)
SPEAKER SYSTEM
WHT
BLU
BLK
ORG
BLU
PUR
BRN
GRY
RED
WHT
GRN
BLK
PUR
BLK
YEW
WHT
SPEAKER NETWORK
RED
BLK
GRY
WHT
NETWORK ASSEMBLY
SWN1197
(➡ P57,P58)
CN26
+11V
GND
-18V
+18V
CN28
+50V
GND
-50V
CN80
SP-R
R-GND
L-GND
SP-L
CN44
PRE L
GND
MUTE
CN25
PRE R
GND
CN43
PRE L
GND
MUTE
CN24
PRE R
GND
CN22
CN19
(➡ P49,P50)
VOLUME
BASS
TONE CONTROL
TREBLE
PAMP
DWH1007
PREB
DWK1011
CN84
ESP-R
R-GND
L-GND
ESP-L
CN83 SPTB
+ L − − R +
EXTERNAL SPEAKERS
CN21
CDP1L
GND
CDP1R
CDP2L
GND
CDP2R
CDP3L
GND
CDP3R
CN20
CDJB
L R
PLAYER1
PLAYER2
PLAYER3
CN81
LINE
GND
LINE
MUTE
CN82
LOJB
LINE OUT
PLA
PLA
PLA
$1
GND
$5
GND
FULL
LAMP1
GLOW1
CN62
CN63
CN64
CN65
CN33
LIVE
COM
FU601
LAMP
BRN
WHT
BALLAST 1
CN66
WHI
BRN
BALLAST 2
BALLAST
DTH1114
CN69
CN68
CN67
GLOW2
LAMP2
FU601 DEK1016
(➡ P47,P48)
GLOW LAMP SOCKET
DKK1009
FLUORESCENT LAMP SOCKET (UPPER)
DKK1006
FLUORESCENT LAMP SOCKET (LOW.LEFT)
DKK1007
TO AC OUTLET 1
TO AC OUTLET 2
TO AC OUTLET 3
CONTROL
CDP1
CDP2
CDP3
CDP1
PD-CJV55
CDP2, CDP3
PD-MV55


BILL VALIDATOR
AC 27V
AC 27V
OVER
$1
GND
$5
GND
FULL
COIN ACCEPTOR
CHANNEL
DXB1207
COIN
GND
+12V
REJ
CN49
(➡P67 – P69)
CNNB
CN113
CN112
CN38
+14V
GND
CN34
UP
DOWN
OVER
GND
+12V
GND
+5V
CN35
CN109
CN108
CN120
GND
MUTE
SEL0
SEL1
CN18
CN115
CN114
(5,P56)
CN23
CN121
-8V
VR UP
VR DOWN
CN22
CN19
(➡P49,P50)
CN42
DOOR
DOOR SW
DSF1001
CN117
CN116
COUNTER
DAW1011
+12V
COUNT
CN70
PLAYER1
PLAYER2
PLAYER3
JA301
JA302
JA303
CN107
CN106
TXD1
RXD1
DTR1
TXD2
RXD2
DTR2
TXD3
RXD3
DTR3
CRJB
VOLUME
BASS
TONE CONTROL
TREBLE
PREB
DWK1011
CN47
CONT
DWG1138
CN100
CN101
CN104
CN105
CN102
CN103
CN110
CN111
V+12V
DEPO
MAKE
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
COL6
COL5
COL4
COL3
COL2
COL1
KEY3
KEY2
KEY1
CLR
BHT
NUM
MENU
V+5V
RTSW
CN55
CN1
CN7
CN51
CN56
CN2
CN8
CN52
CN39
BRAN
ROTA
CN15
CN17
OPER
CN21
CN81
CDP1R
CDP2L
CDP2R
CDP3L
CDP3R
LINE L
LINE R
CN20
CN82
CDJB
LOJB
PLAYER2
PLAYER3
LINE OUT
CN13
DS8
DS7
DS6
DS5
DS4
DS3
DS2
DS1
CN14
DIPS
CN50
DOWN SW
UP SW
CANCEL
CN45
RMJB
REMOTE CONTROL
(➡P36 – P38)
CONTROL
CDP2
CDP3
VOL
CANCEL
REMOTE CONTROL UNIT
DXR1007

CDP1
PD-CJV55

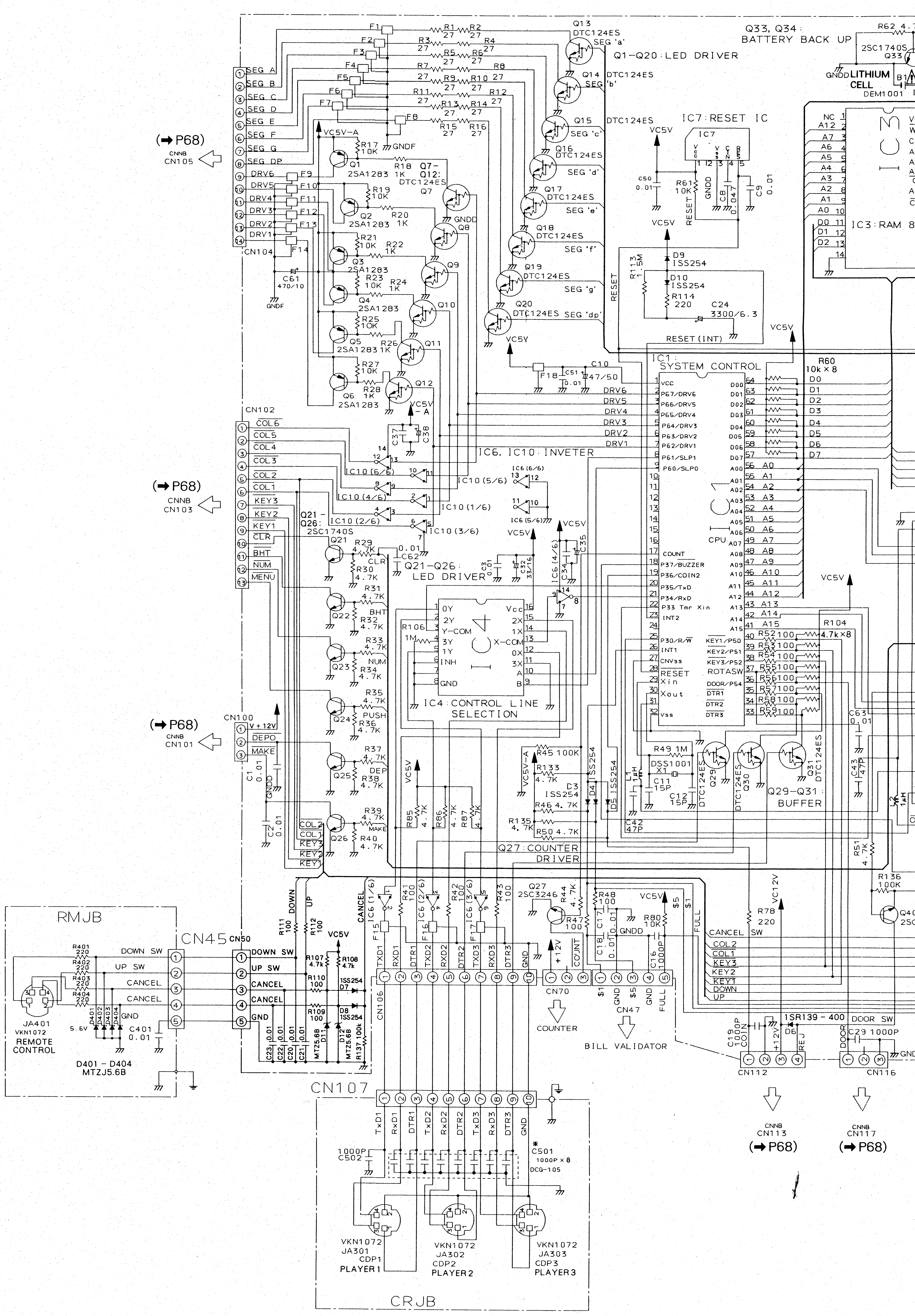
CDP2, CDP3
PD-MV55

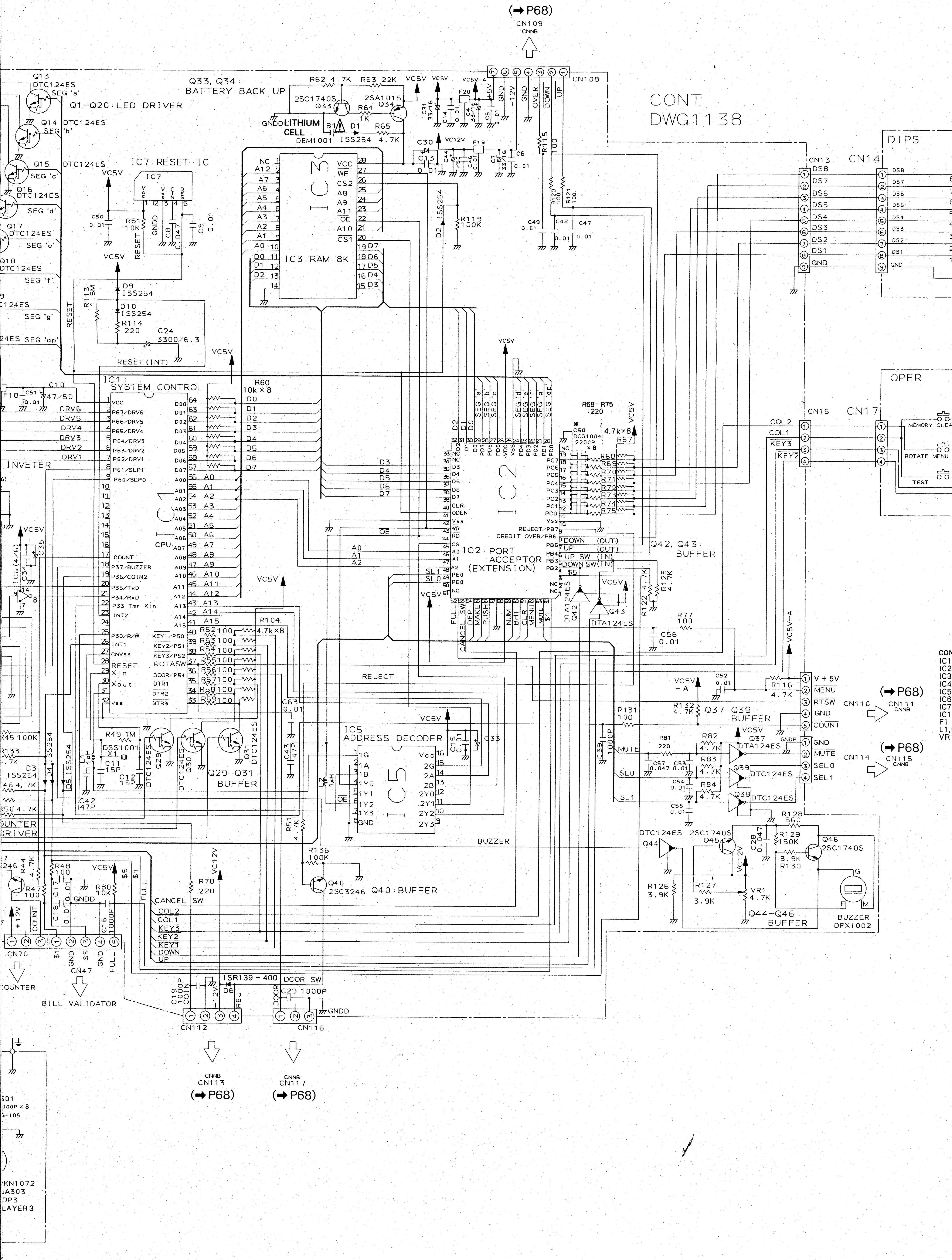
NOTE
RESERVE : CN72 FOR RCU SENS

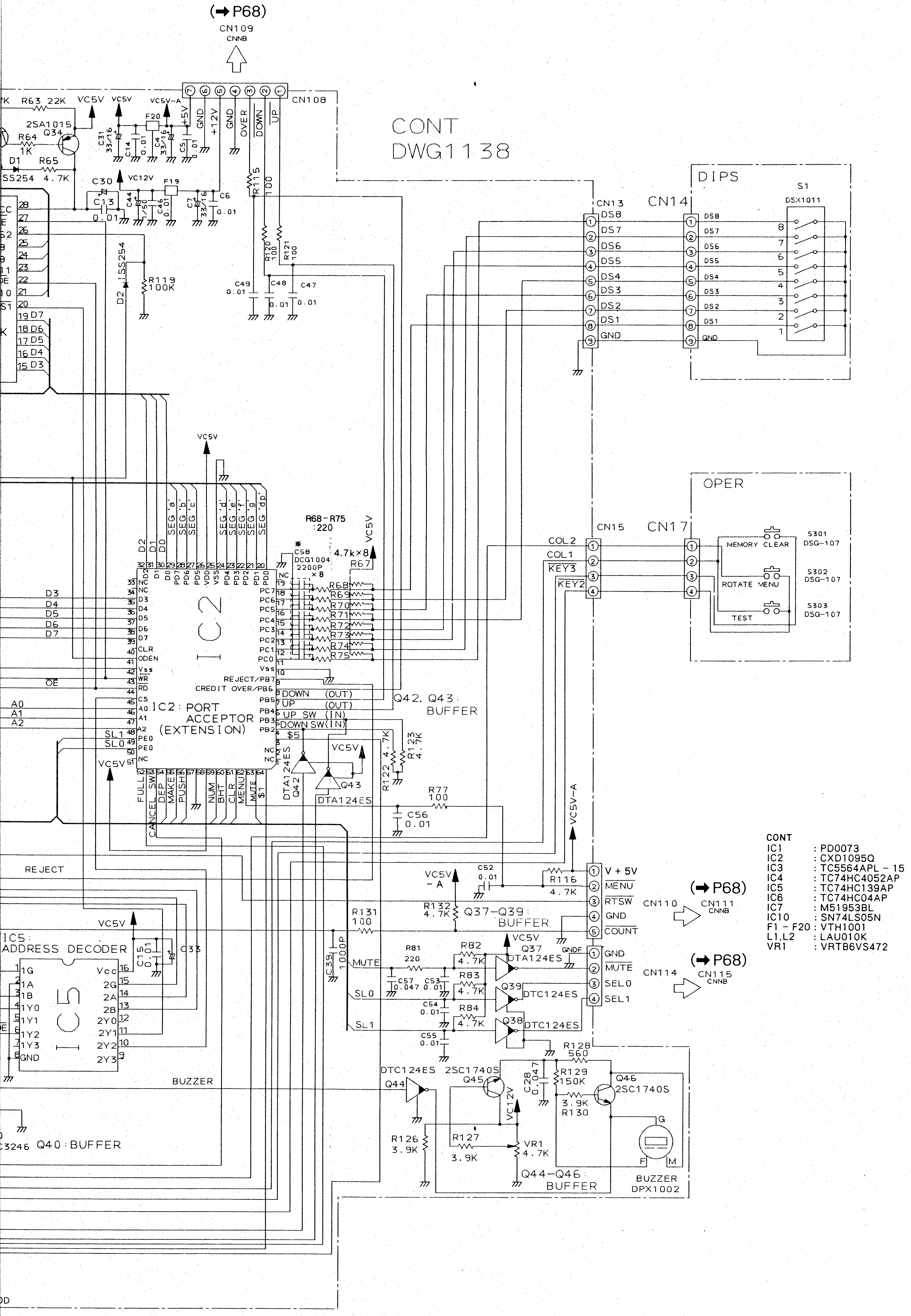

COIN ACCEPTOR
CHANNEL
DXB1207
COIN
GND
+12V
REJ
CN49
CN113
CN112
CNNB
(➡P67 – P69)
CN109
CN108
UP
DOWN
OVER
GND
+12V
GND
+5V
CN35
CN18
CN115
CN114
GND
MUTE
SEL0
SEL1
CN117
CN116
DOOR
GND
CN42
COUNTER
DAW1011
COUNTER
+12V
COUNT
CN70
JA301
JA302
JA303
LAYER1
LAYER2
LAYER3
CN107
CN106
TXD1
RXD1
DTR1
TXD2
RXD2
DTR2
TXD3
RXD3
DTR3
GND
CRJB
CN47
$1
GND
$5
GND
FULL
CONT
DWG1138
CN100
CN101
V+12V
DEPO
MAKE
CN104
CN105
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
CN102
CN103
COL6
COL5
COL4
COL3
COL2
COL1
KEY3
KEY2
KEY1
CLR
BHT
NUM
MENU
CN110
CN111
V+5V
MENU
RTSW
GND
COUNT
CN55
CN56
CN1
CN2
CN7
CN8
CN51
CN52
ROTA
BRAN
CN57
CN58
MESS
DWG1128
CN3
CN4
DISP
CN5
CN6
DRV1
DRV2
DRV3
DRV4
DRV5
DRV6
DWG1129
CN9
CN10
KEYB
CN11
CN12
+12V
DWS1101
CN59
CN60
+5V
RTSW
GND
POSS
CN61
+14V
DRV
MENU MOTOR
M
0.1/25
C701
C702
1/50
C703
0.1/25
C704
1/50
+14V
GND
CN39
CN85
CN86
+5V
COUNT
GND
CNTB
CN15
CN17
COL2
COL1
KEY3
KEY2
OPER
CN13
CN50
DS8
DS7
DS6
DS5
DS4
DS3
DS2
DS1
GND
DOWN SW
UP SW
CANCEL
CANCEL
GND
CN14
CN45
DIPS
RMJB
(➡P36 – P38)
REMOTE
CONTROL
VOL
CANCEL
REMOTE CONTROL UNIT
DXR1007

NOTE
RESERVE : CN72 FOR RCU SENS

4.1.2 DIPS, CRJB, CONT, RMJB AND OPER

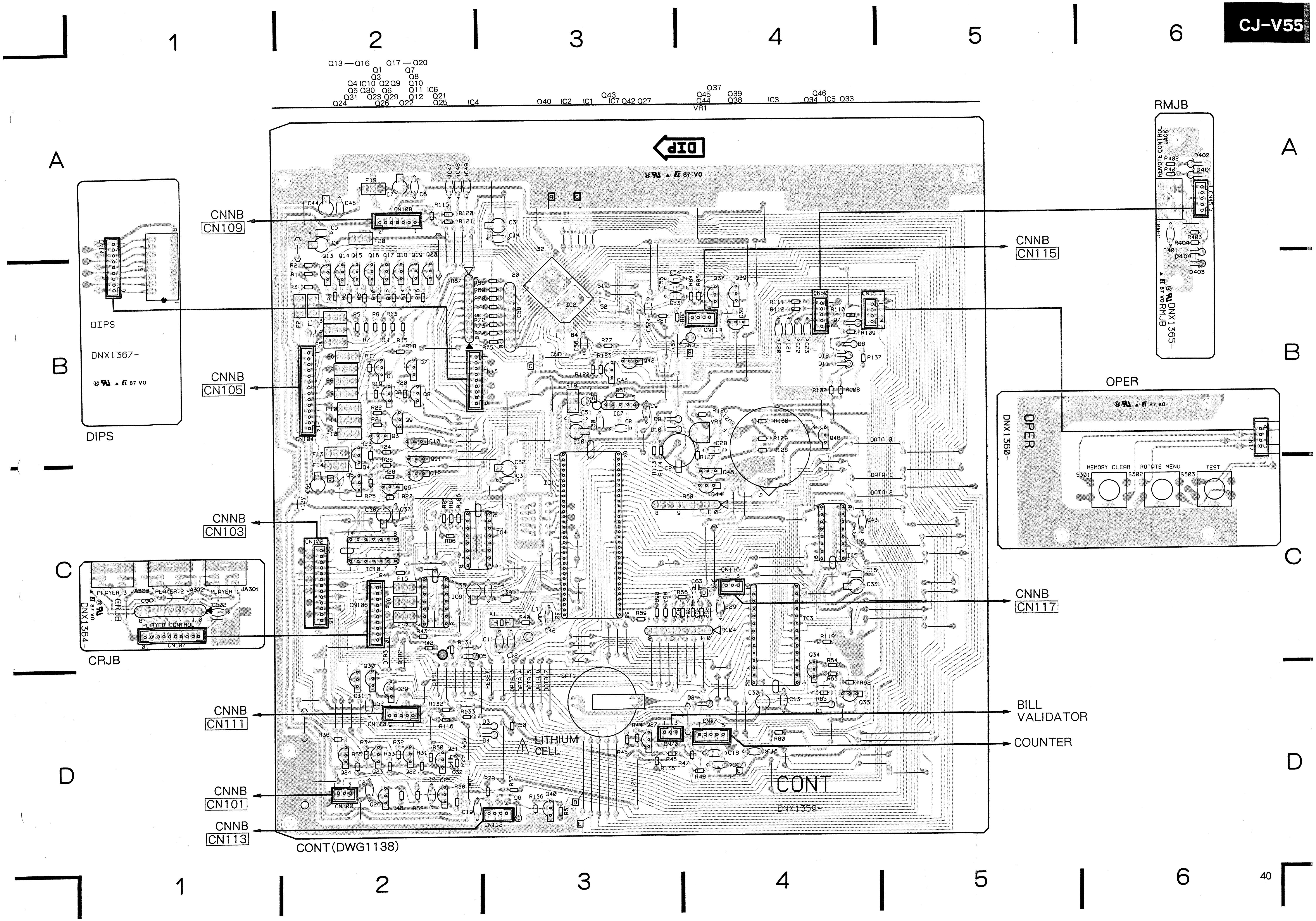

Q13 DTC124ES SEG 'a'
Q1–Q20 : LED DRIVER
Q33, Q34 : BATTERY BACK UP
2SC1740S Q33
LITHIUM CELL
DEM1001
IC7 : RESET IC
IC3 : RAM
(➡ P68) CNNB CN105
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
CN104
Q7–Q12: DTC124ES
2SA1283
IC1 : SYSTEM CONTROL
CPU
R60 10k × 8
IC6, IC10 : INVETER
CN102
(➡ P68) CNNB CN103
COL6
COL5
COL4
COL3
COL2
COL1
KEY3
KEY2
KEY1
CLR
BHT
NUM
MENU
Q21–Q26: 2SC1740S
Q21–Q26 : LED DRIVER
IC4 : CONTROL LINE SELECTION
(➡ P68) CNNB CN101
CN100
V+12V
DEPO
MAKE
Q29–Q31 : BUFFER
Q27 : COUNTER DRIVER
RMJB
CN45
CN50
DOWN SW
UP SW
CANCEL
GND
JA401 VKN1072 REMOTE CONTROL
D401 – D404 MTZJ5.6B
CN106
CN70
COUNTER
CN47
BILL VALIDATOR
CN112
CN116
DOOR SW
CNNB CN113 (➡ P68)
CNNB CN117 (➡ P68)
CN107
TxD1
RxD1
DTR1
TxD2
RxD2
DTR2
TxD3
RxD3
DTR3
GND
C501 1000P × 8 DCG-105
VKN1072 JA301 CDP1 PLAYER1
VKN1072 JA302 CDP2 PLAYER2
VKN1072 JA303 CDP3 PLAYER3
CRJB

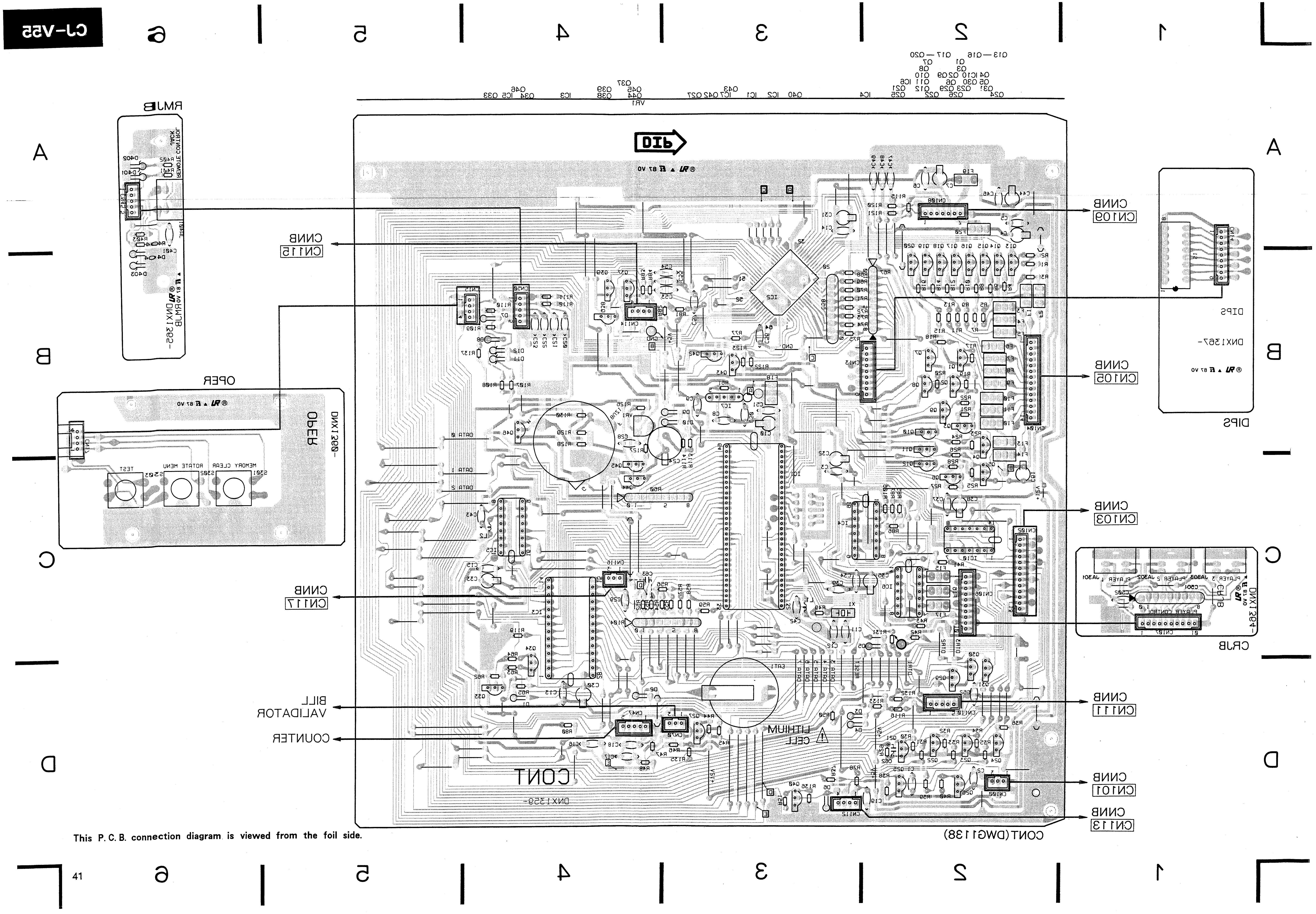

(➡P68)
CN109
CNNB
CN108
CONT
DWG1138
DIPS
CN13
CN14
DS8
DS7
DS6
DS5
DS4
DS3
DS2
DS1
GND
Q13
DTC124ES
SEG 'a'
Q1–Q20 : LED DRIVER
Q14
SEG 'b'
Q15
SEG 'c'
Q16
SEG 'd'
Q17
SEG 'e'
Q18
SEG 'f'
SEG 'g'
SEG 'dp'
Q33, Q34 :
BATTERY BACK UP
2SC1740S
Q33
2SA1015
Q34
R62 4.7K
R63 22K
R64 1K
R65 4.7K
LITHIUM
CELL
DEM1001
B1
D1
1SS254
VC5V
VC5V-A
VC12V
+5V
GND
+12V
OVER
DOWN
UP
F20
F19
R115
100
R120
100
R121
100
C49
C48
C47
IC7 : RESET IC
IC7
R61
10K
C50
C9
C8
RESET
D9
1SS254
D10
1SS254
R113
1.5M
R114
220
C24
3300/6.3
RESET (INT)
IC3
IC3 : RAM 8K
D2
1SS254
R119
100K
IC1 :
SYSTEM CONTROL
CPU
R60
10k × 8
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
INVETER
F18
C51
C10
47/50
IC2
IC2 : PORT
ACCEPTOR
(EXTENSION)
R68–R75
: 220
C58
DCG1004
2200P × 8
4.7k × 8
R67
DOWN (OUT)
UP (OUT)
UP SW (IN)
DOWN SW (IN)
$5
Q42, Q43 :
BUFFER
Q42
DTA124ES
Q43
DTA124ES
R122
4.7K
R123
4.7K
R77
100
C56
0.01
OPER
CN15
CN17
COL2
COL1
KEY3
KEY2
MEMORY CLEA
ROTATE MENU
TEST
R104
4.7k × 8
R52–R59
100
R49 1M
DSS1001
X1
C11
15P
C12
15P
L1
1μH
Q29
Q30
Q31
DTC124ES
Q29–Q31 :
BUFFER
C63
0.01
C43
47P
REJECT
IC5 :
ADDRESS DECODER
IC5
C15
C33
L2
1μH
R51
4.7K
BUZZER
R136
100K
Q40
2SC3246
Q40 : BUFFER
V +5V
MENU
RTSW
GND
COUNT
CN110
(➡P68)
CN111
CNNB
R116
4.7K
C52
0.01
R132
4.7K
Q37–Q39 :
BUFFER
R131
100
C39
1000P
MUTE
SL0
SL1
R81
220
R82
4.7K
R83
4.7K
R84
4.7K
C57
0.047
C53
0.01
C54
0.01
C55
0.01
Q37
DTA124ES
Q39
DTC124ES
Q38
DTC124ES
GND
MUTE
SEL0
SEL1
CN114
(➡P68)
CN115
CNNB
R128
560
DTC124ES
Q44
2SC1740S
Q45
C28
0.047
R129
150K
Q46
2SC1740S
3.9K
R130
R126
3.9K
R127
3.9K
VR1
4.7K
Q44–Q46 :
BUFFER
BUZZER
DPX1002
R45 100K
R133
4.7K
D3
1SS254
D4
1SS254
D5
1SS254
R46 4.7K
R50 4.7K
C42
47P
COUNTER
DRIVER
R44
4.7K
R47
100
R48
100
C17
C18
R80
10K
C16
1000P
GNDD
R78
220
CANCEL
SW
COL2
COL1
KEY3
KEY2
KEY1
DOWN
UP
FULL
$1
$5
CN70
COUNTER
CN47
BILL VALIDATOR
C19
1000P
1SR139–400
D6
C29 1000P
DOOR SW
GNDD
CN112
CN116
CNNB
CN113
(➡P68)
CNNB
CN117
(➡P68)
501
000P × 8
G-105
/KN1072
JA303
DP3
LAYER3


(➡ P68)
CN109
CNNB
CN108
CONT
DWG1138
DIPS
S1
DSX1011
CN13
CN14
DS8
DS7
DS6
DS5
DS4
DS3
DS2
DS1
GND
OPER
CN15
CN17
COL2
COL1
KEY3
KEY2
MEMORY CLEAR
S301 DSG-107
ROTATE MENU
S302 DSG-107
TEST
S303 DSG-107
IC2
IC2: PORT ACCEPTOR (EXTENSION)
R68-R75 :220
4.7k×8
R67
C58 DCG1004 2200P ×8
Q42, Q43: BUFFER
DTA124ES Q42
Q43 DTA124ES
R122 4.7K
R123 4.7K
R77 100
C56 0.01
VC5V-A
V +5V
MENU
RTSW
GND
COUNT
CN110
(➡ P68)
CN111
CNNB
C52 0.01
R116 4.7K
R132 4.7K
Q37-Q39: BUFFER
R131 100
C39 1000P
MUTE
R81 220
R82 4.7K
Q37 DTA124ES
R83 4.7K
Q39 DTC124ES
R84 4.7K
Q38 DTC124ES
SL0
SL1
C57 0.047
C53 0.01
C54 0.01
C55 0.01
GND
MUTE
SEL0
SEL1
CN114
(➡ P68)
CN115
CNNB
R128 560
R129 150K
C28 0.047
Q46 2SC1740S
R130 3.9K
DTC124ES Q44
2SC1740S Q45
R126 3.9K
R127 3.9K
VR1 4.7K
VC12V
Q44-Q46 BUFFER
BUZZER DPX1002
BUZZER
REJECT
IC5: ADDRESS DECODER
IC5
C15 0.01
C33
Q40: BUFFER
R63 22K
2SA1015 Q34
R64 1K
D1
R65 4.7K
1SS254
C30
VC12V
F19
F20
C13 0.01
C31 33/16
C14 0.01
C4 33/16
C5 0.01
C44
C46 0.01
C7 33/16
C6 0.01
R115 100
R120 100
R121 100
C49 0.01
C48 0.01
C47 0.01
D2 1SS254
R119 100K
GND
+12V
OVER
DOWN
UP
+5V
VC5V
VC5V-A
A0
A1
A2
D3
D4
D5
D6
D7
OE
SL1
SL0
DOWN (OUT)
UP (OUT)
UP SW (IN)
DOWN SW (IN)
REJECT/PB7
CREDIT OVER/PB6
FULL SW
CANCEL
DEP
MAKE
PUSH
NUM
BHT
CLR
MENU
MUTE
$1
$5

CONT

IC1	: PD0073
IC2	: CXD1095Q
IC3	: TC5564APL - 15
IC4	: TC74HC4052AP
IC5	: TC74HC139AP
IC6	: TC74HC04AP
IC7	: M51953BL
IC10	: SN74LS05N
F1 - F20	: VTH1001
L1,L2	: LAU010K
VR1	: VRTB6VS472

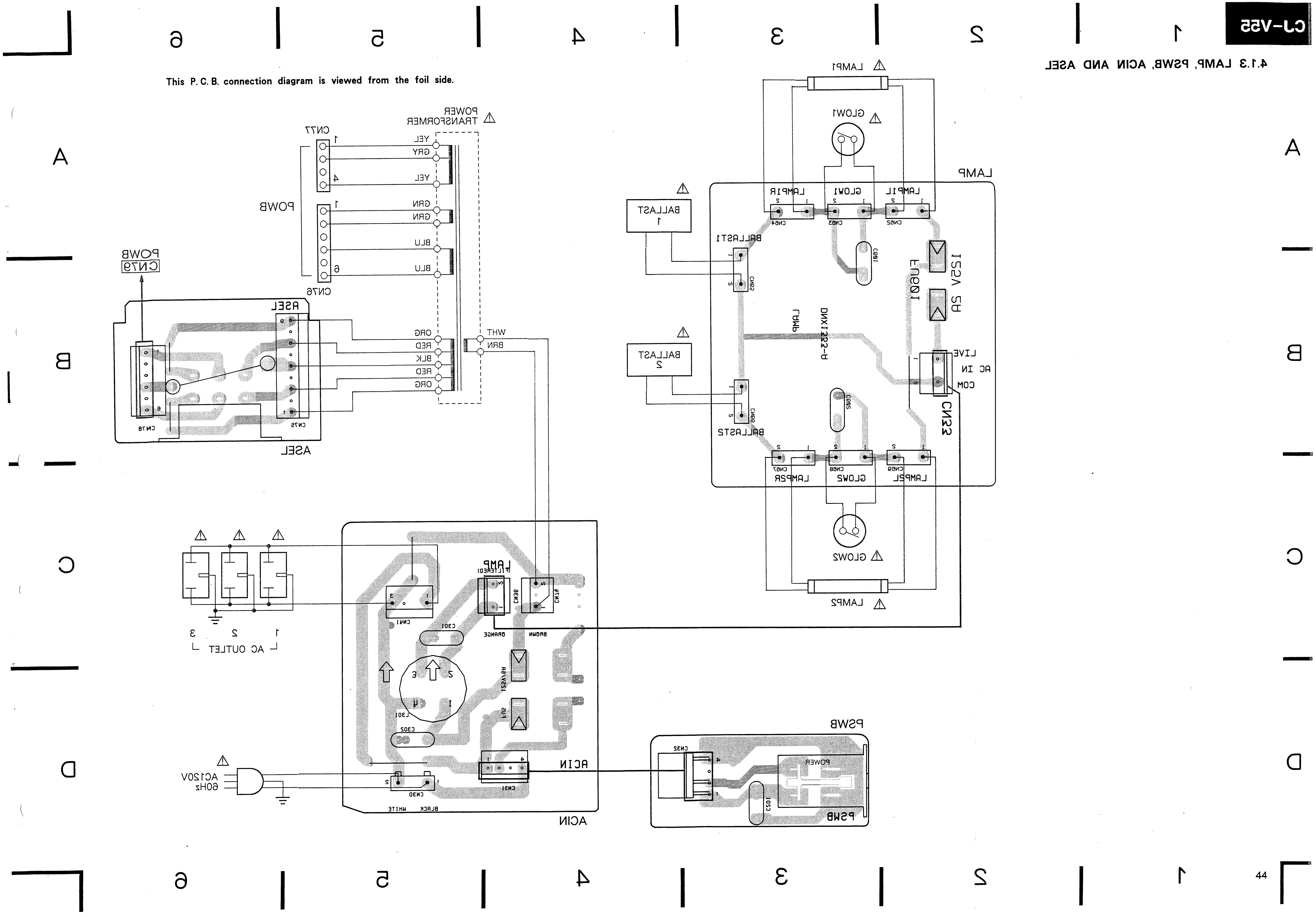

1
2
3
4
5
6
A
B
C
D
Q13 — Q16 Q17 — Q20 Q1 Q7 Q3 Q8 Q4 IC10 Q2 Q9 Q10 Q5 Q30 Q6 Q11 IC6 Q31 Q23 Q29 Q12 Q21 Q24 Q26 Q22 Q25 IC4 Q40 IC2 IC1 Q43 IC7 Q42 Q27 Q37 Q45 Q44 VR1 Q39 Q38 IC3 Q46 Q34 IC5 Q33
DIP
DIPS
DNX1367-
CNNB
CN109
CNNB
CN105
CNNB
CN103
CNNB
CN111
CNNB
CN101
CNNB
CN113
CONT(DWG1138)
CNNB
CN115
CNNB
CN117
BILL VALIDATOR
COUNTER
LITHIUM CELL
CONT
DNX1359-
DATA 0
DATA 1
DATA 2
DATA 3
DATA 4
DATA 5
DATA 6
DATA 7
RESET
GND
CRJB
DNX1364-
PLAYER 3
JA303
PLAYER 2
JA302
PLAYER 1
JA301
PLAYER CONTROL
CN107
RMJB
REMOTE CONTROL JACK
DNX1365-RMJB
OPER
DNX1360-
MEMORY CLEAR
ROTATE MENU
TEST
S301
S302
S303
CN17


CJ-V55
6
5
4
3
2
1
A
B
C
D
RMJB
DNX1365-
OPER
DNX1360-
MEMORY CLEAR
ROTATE MENU
TEST
DIPS
DNX1367-
CRJB
DNX1364-
PLAYER 1
PLAYER 2
PLAYER 3
PLAYER CONTROL
DIP
CONT
DNX1359-
CONT(DWG1138)
LITHIUM CELL
CNNB CN115
CNNB CN117
CNNB CN109
CNNB CN105
CNNB CN103
CNNB CN111
CNNB CN101
CNNB CN113
BILL VALIDATOR
COUNTER
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC10
VR1
DATA 0
DATA 1
DATA 2

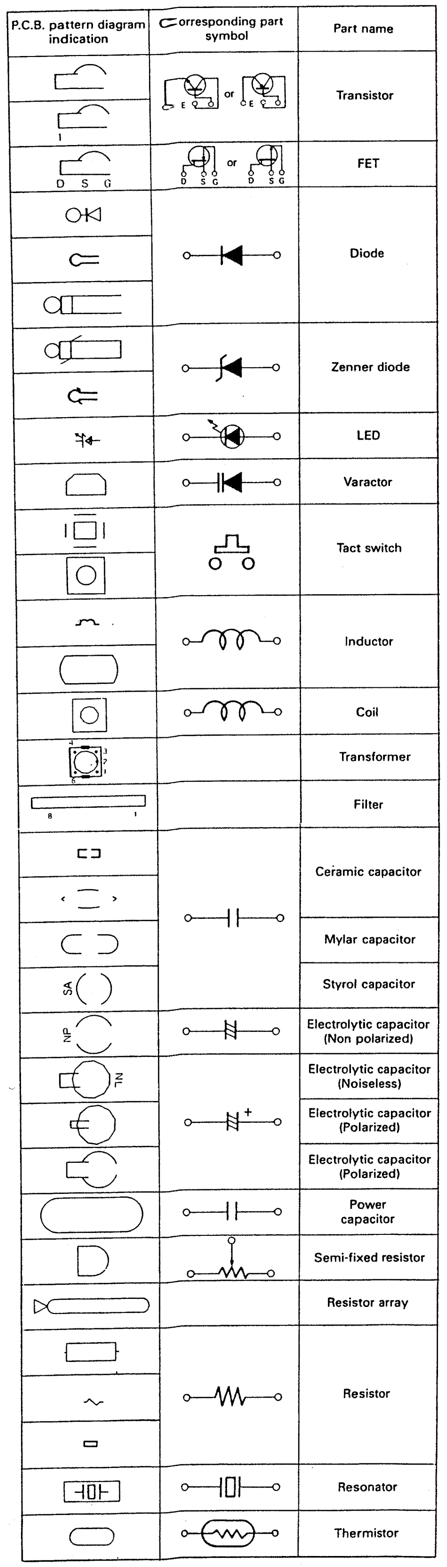
This P. C. B. connection diagram is viewed from the foil side.

4.1.3 LAMP, PSWB, ACIN AND ASEL

This P. C. B. connection diagram is viewed from the foil side.

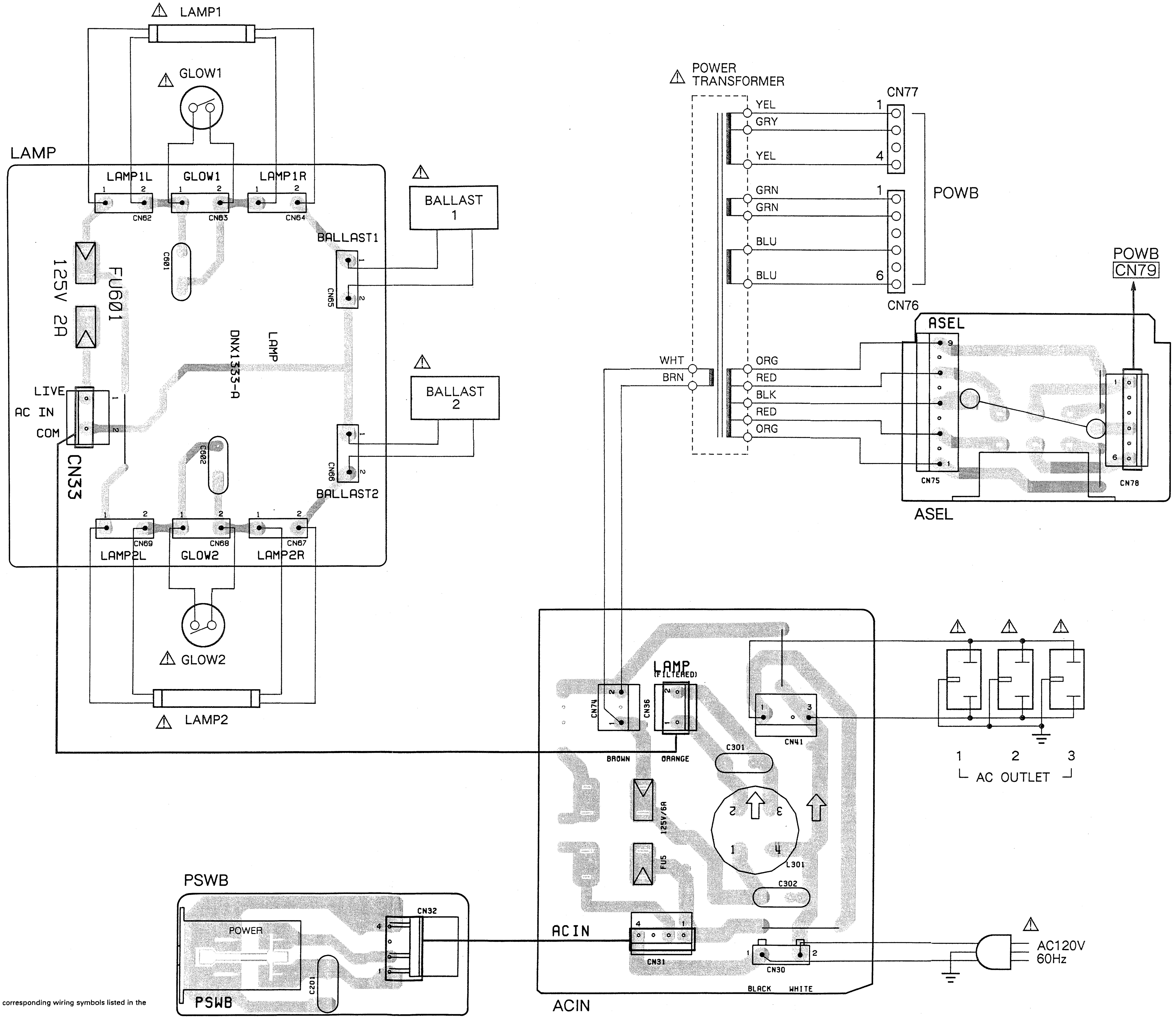

6
5
4
3
2
1
A
B
C
D
LAMP1
GLOW1
LAMP
LAMP1R
GLOW1
LAMP1L
CN64
CN65
CN62
BALLAST 1
BALLAST 2
BALLAST1
BALLAST2
CN95
CN96
C801
FU801
125V 2A
DXX1322-B
LAMP
LIVE
AC IN
COM
CN63
C802
CN67
CN68
CN69
LAMP2R
GLOW2
LAMP2L
GLOW2
LAMP2
POWER TRANSFORMER
CN77
YEL
GRY
YEL
GRN
GRN
BLU
BLU
POWB
CN76
POWB CN79
ASEL
ORG
RED
BLK
RED
ORG
WHT
BRN
CN75
CN78
ASEL
AC OUTLET
1
2
3
AC120V 60Hz
LAMP (FILTERED)
CN33
CN34
CN41
C301
ORANGE
BROWN
FU3
L301
C302
ACIN
CN30
CN31
BLACK
WHITE
ACIN
PSWB
CN32
POWER
C102
PSWB

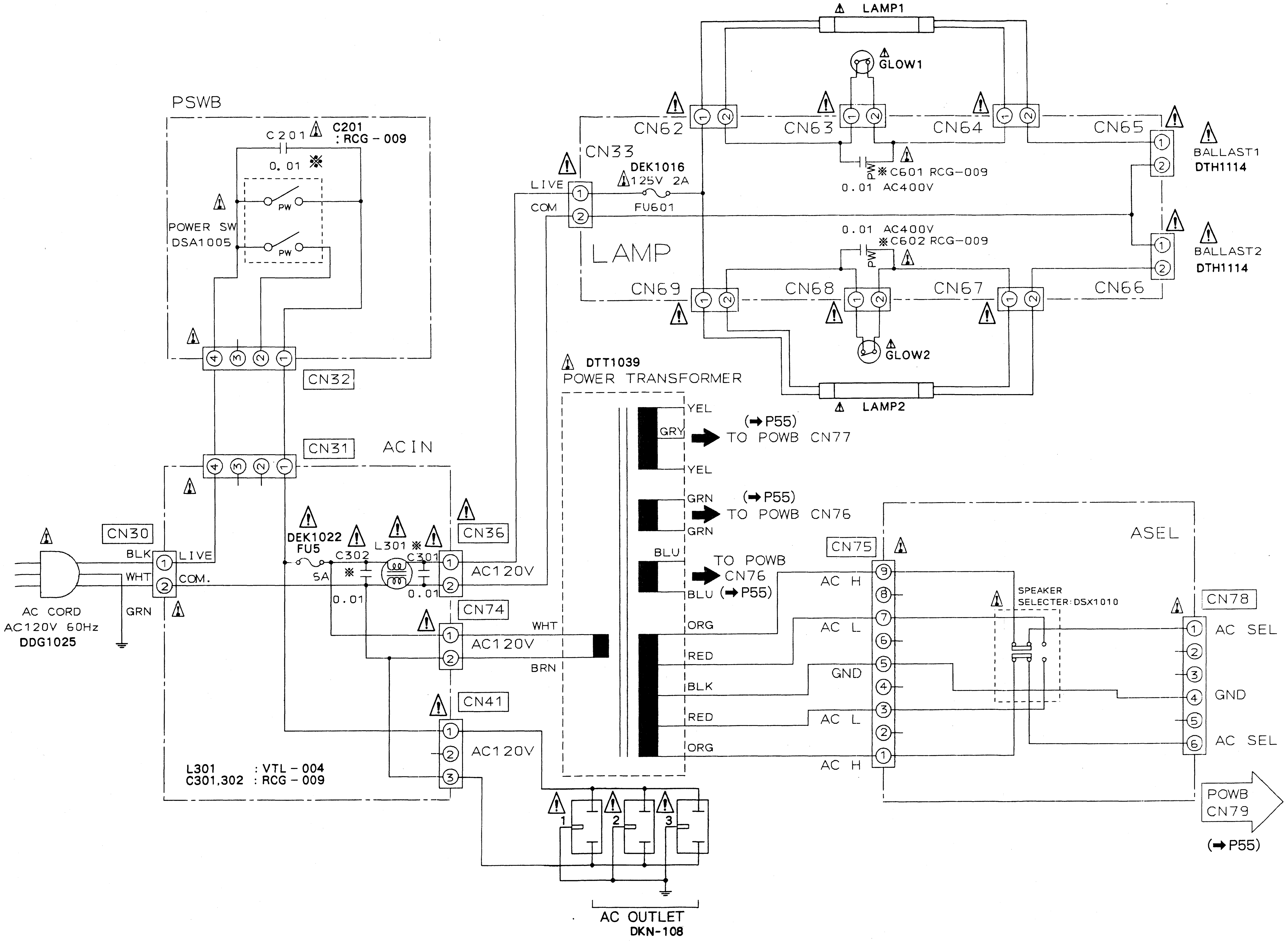
4.1.3 LAMP, PSWB, ACIN AND ASEL



P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.


⚠ LAMP1
⚠ GLOW1
LAMP
LAMP1L
GLOW1
LAMP1R
CN62
CN63
CN64
C601
125V 2A
FU601
DNX1333-A
LAMP
⚠
BALLAST 1
BALLAST1
CN65
LIVE
AC IN
COM
CN33
⚠
BALLAST 2
CN66
C602
BALLAST2
CN69
CN68
CN67
LAMP2L
GLOW2
LAMP2R
⚠ GLOW2
⚠ LAMP2
⚠ POWER TRANSFORMER
YEL
GRY
YEL
CN77
POWB
GRN
GRN
BLU
BLU
CN76
POWB
CN79
ASEL
WHT
BRN
ORG
RED
BLK
RED
ORG
CN75
CN78
ASEL
LAMP (FILTERED)
CN74
CN36
BROWN
ORANGE
C301
CN41
125V/6A
FU5
L301
C302
⚠ ⚠ ⚠
1 2 3
AC OUTLET
PSWB
POWER
CN32
C201
PSWB
ACIN
CN31
CN30
BLACK
WHITE
ACIN
⚠
AC120V
60Hz


A
B
C
D
PSWB
C201
C201 : RCG - 009
0.01 ※
POWER SW
DSA1005
PW
PW
CN32
CN31
ACIN
CN30
BLK
WHT
GRN
LIVE
COM.
AC CORD
AC120V 60Hz
DDG1025
DEK1022
FU5
5A
C302
※
0.01
L301 ※
C301
0.01
CN36
AC120V
CN74
AC120V
CN41
AC120V
L301 : VTL - 004
C301,302 : RCG - 009
AC OUTLET
DKN-108
1
2
3
LIVE
COM
CN33
DEK1016
125V 2A
FU601
LAMP
CN62
CN63
CN64
CN65
CN66
CN67
CN68
CN69
LAMP1
LAMP2
GLOW1
GLOW2
※C601 RCG-009
0.01 AC400V
0.01 AC400V
※C602 RCG-009
PW
PW
BALLAST1
DTH1114
BALLAST2
DTH1114
DTT1039
POWER TRANSFORMER
YEL
GRY
YEL
(➡P55)
TO POWB CN77
GRN
GRN
(➡P55)
TO POWB CN76
BLU
BLU
TO POWB
CN76
(➡P55)
WHT
BRN
ORG
RED
BLK
RED
ORG
ASEL
CN75
AC H
AC L
GND
AC L
AC H
SPEAKER
SELECTER: DSX1010
CN78
AC SEL
GND
AC SEL
POWB
CN79
(➡P55)

1 2 3 4 5 6

4.1.4 PREB, CDJB AND LOJB

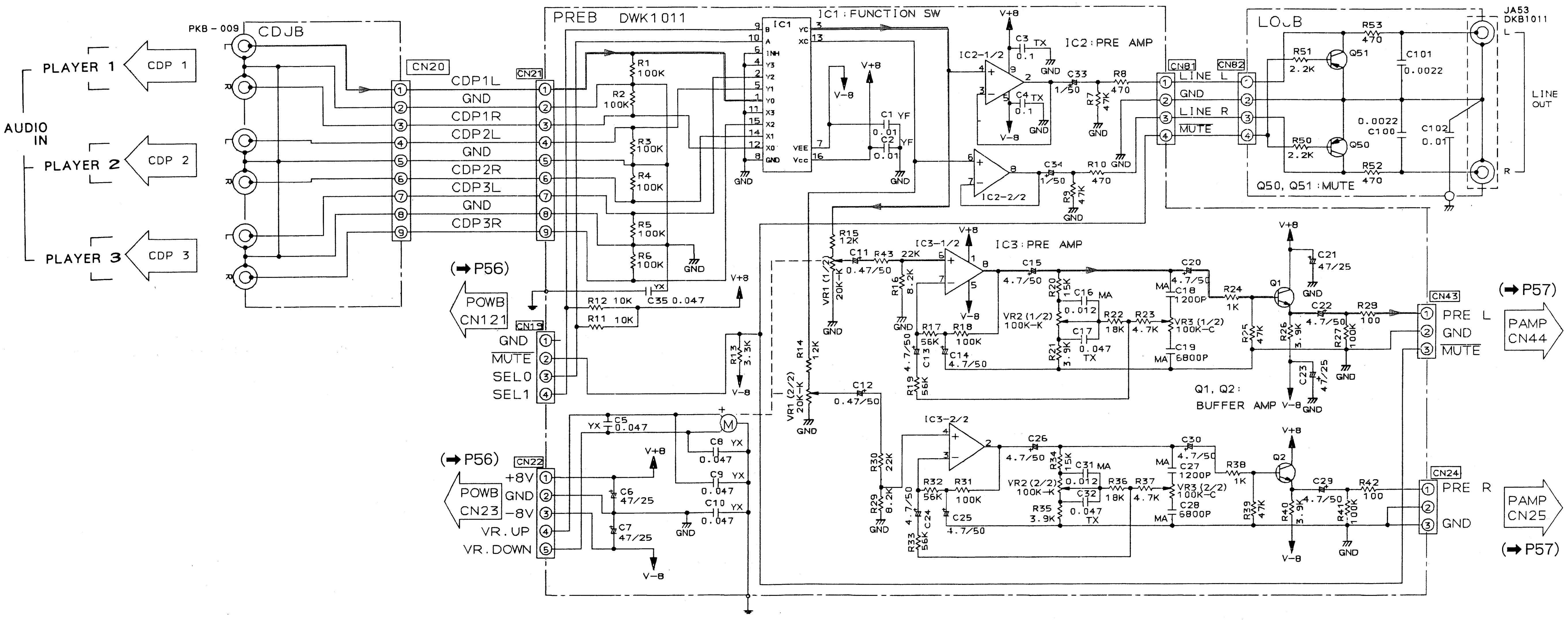
A

PREB
Q1, 2 : 2SC3311A
IC1 : TC4052BP
IC2, 3 : NJM4558S
VR1 : DCS1013
VR2, 3 : DCS1014

LOJB
Q50,Q51 2SA1309A

B

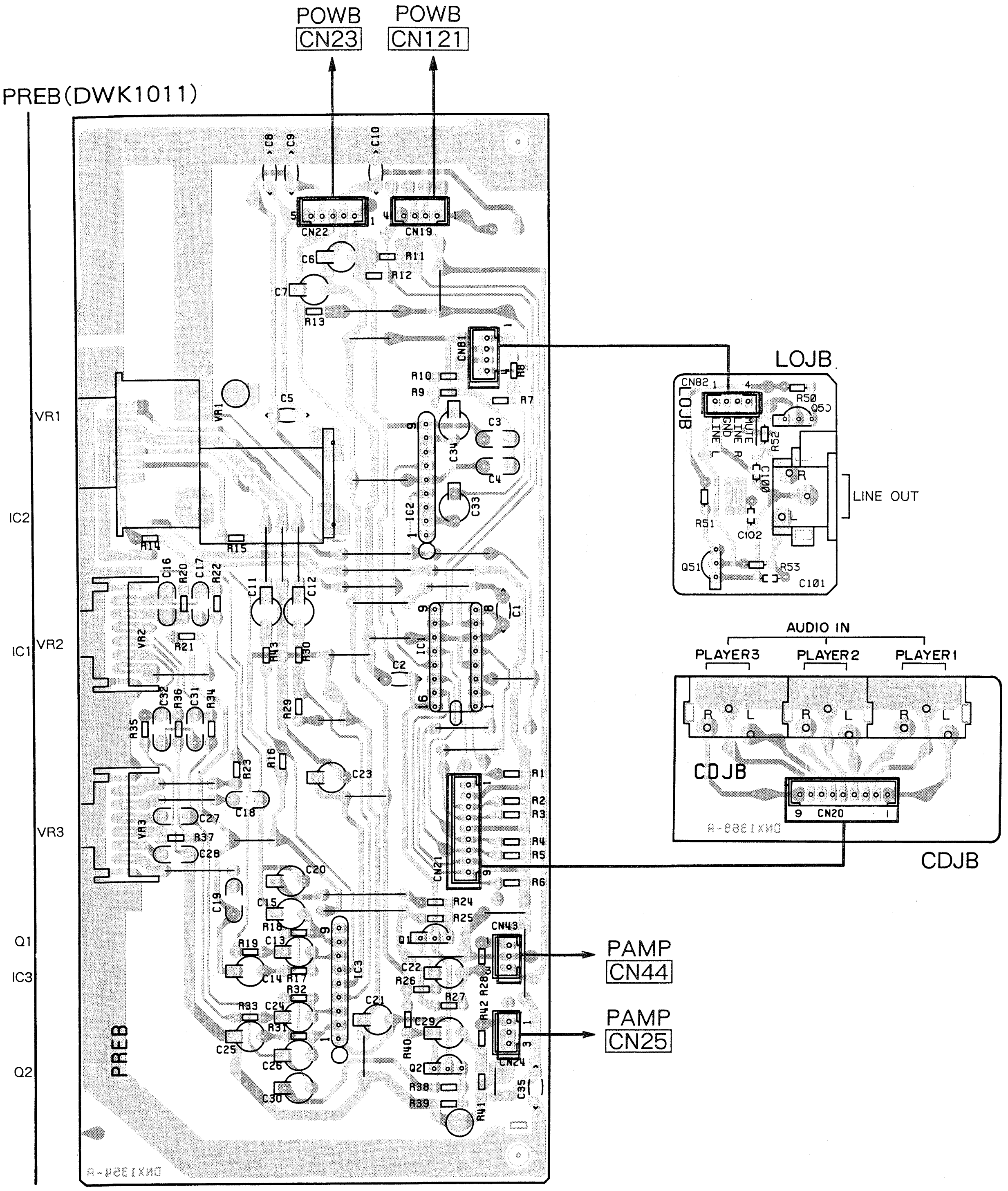
C


AUDIO IN
PLAYER 1
CDP 1
PLAYER 2
CDP 2
PLAYER 3
CDP 3
PKB-009
CDJB
CN20
CN21
CDP1L
GND
CDP1R
CDP2L
GND
CDP2R
CDP3L
GND
CDP3R
PREB DWK1011
R1 100K
R2 100K
R3 100K
R4 100K
R5 100K
R6 100K
IC1
IC1 : FUNCTION SW
INH
VEE
Vcc
GND
C1 0.01 YF
C2 0.01 YF
V+8
V-8
IC2-1/2
IC2-2/2
IC2 : PRE AMP
C3 0.1 TX
C4 0.1 TX
C33 1/50
R8 470
R7 47K
C34 1/50
R10 470
R9 47K
CN81
CN82
LINE L
GND
LINE R
MUTE
LOJB
R51 2.2K
R50 2.2K
R53 470
R52 470
Q51
Q50
C101 0.0022
C100 0.0022
C102 0.01
Q50, Q51 : MUTE
JA53 DKB1011
L
R
LINE OUT
(➡P56)
POWB CN121
CN19
GND
MUTE
SEL0
SEL1
R12 10K
R11 10K
C35 0.047
YX
R13 3.3K
R14 12K
R15 12K
VR1 (1/2) 20K-K
VR1 (2/2) 20K-K
C11 0.47/50
C12 0.47/50
R43 22K
R16 8.2K
IC3-1/2
IC3-2/2
IC3 : PRE AMP
R17 56K
R18 100K
C13 4.7/50
C14 4.7/50
R19 56K
C15 4.7/50
R20 15K
C16 MA
0.012
VR2 (1/2) 100K-K
C17 0.047 TX
R21 3.9K
R22 18K
R23 4.7K
VR3 (1/2) 100K-C
C18 1200P MA
C19 6800P MA
C20 4.7/50
R24 1K
Q1
C21 47/25
C22 4.7/50
R25 47K
R26 3.9K
R27 100K
R29 100
C23 47/25
Q1, Q2 : BUFFER AMP
CN43
PRE L
GND
MUTE
(➡P57)
PAMP CN44
M
C5 0.047
C8 0.047 YX
C9 0.047 YX
C10 0.047 YX
(➡P56)
CN22
+8V
GND
-8V
VR.UP
VR.DOWN
POWB CN23
C6 47/25
C7 47/25
R30 22K
R29 8.2K
R32 56K
R31 100K
C24 4.7/50
C25 4.7/50
R33 56K
C26 4.7/50
R34 15K
C31 MA 0.012
VR2 (2/2) 100K-K
C32 0.047 TX
R35 3.9K
R36 18K
R37 4.7K
VR3 (2/2) 100K-C
C27 1200P MA
C28 6800P MA
C30 4.7/50
R38 1K
Q2
C29 4.7/50
R39 47K
R40 3.9K
R41 100K
R42 100
CN24
PRE R
GND
PAMP CN25
(➡P57)

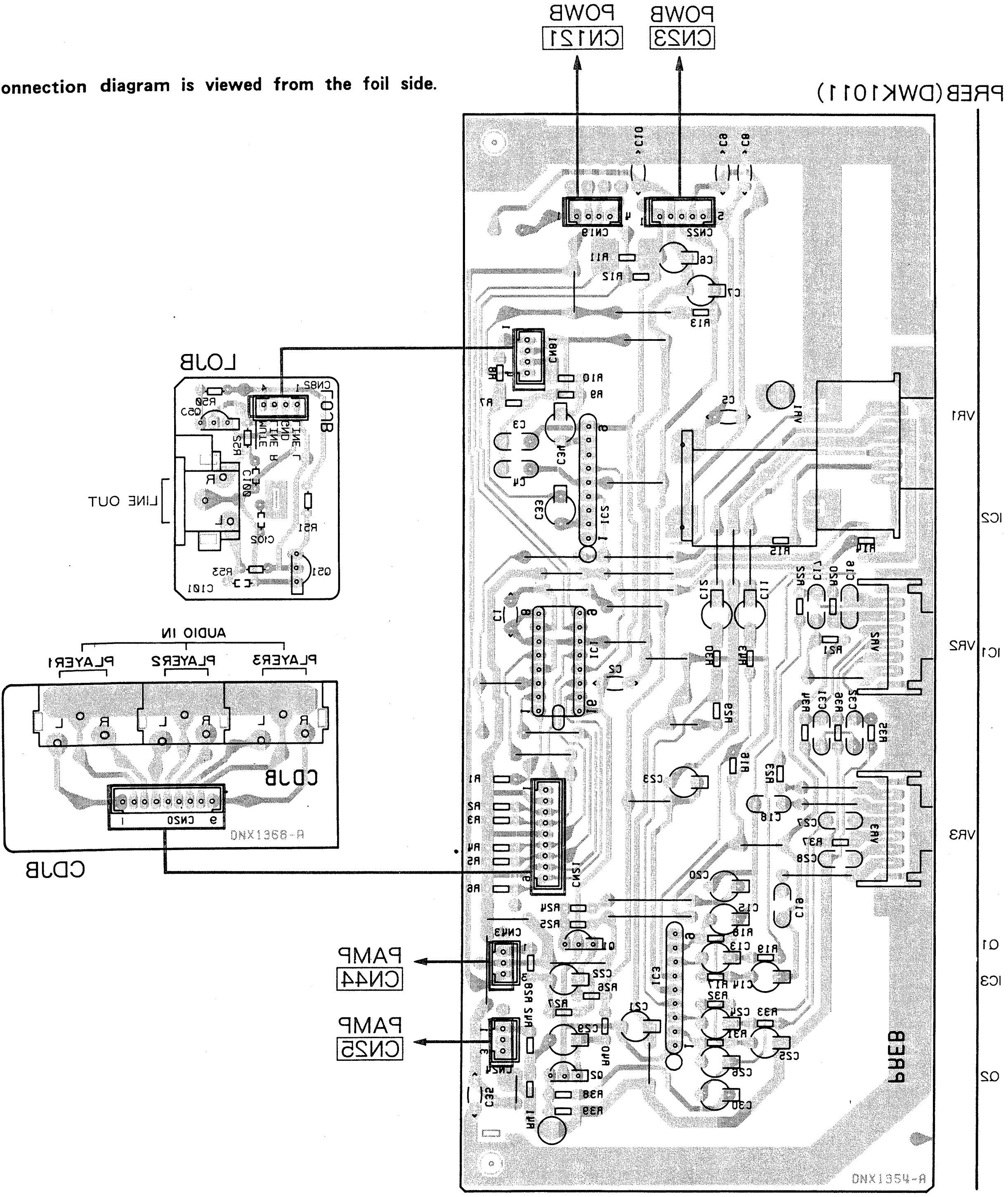
: AUDIO Signal Line

D

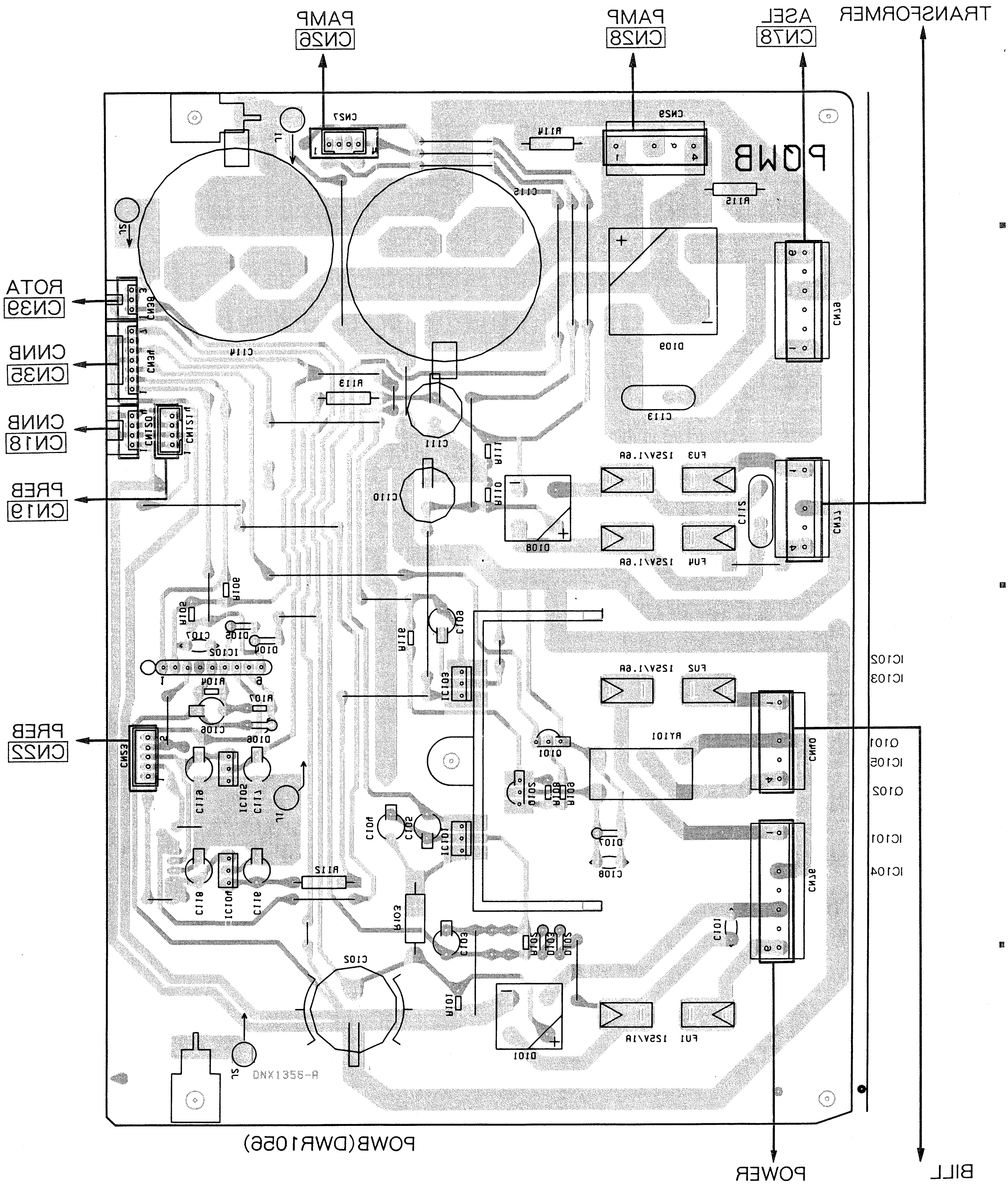
1 2 3 4 5 6


POWB
CN23
POWB
CN121
PREB(DWK1011)
VR1
IC2
IC1
VR2
VR3
Q1
IC3
Q2
PREB
CN22
CN19
CN81
CN21
CN43
CN24
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
C33
C34
C35
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R43
DNX1354-A
LOJB
CN82
MUTE
LINE R
GND
LINE L
R50
Q50
R52
C100
R51
C102
Q51
R53
C101
LINE OUT
R
L
AUDIO IN
PLAYER3
PLAYER2
PLAYER1
CDJB
CN20
DNX1369-A
CDJB
PAMP
CN44
PAMP
CN25

his P. C. B. connection diagram is viewed from the foil side.

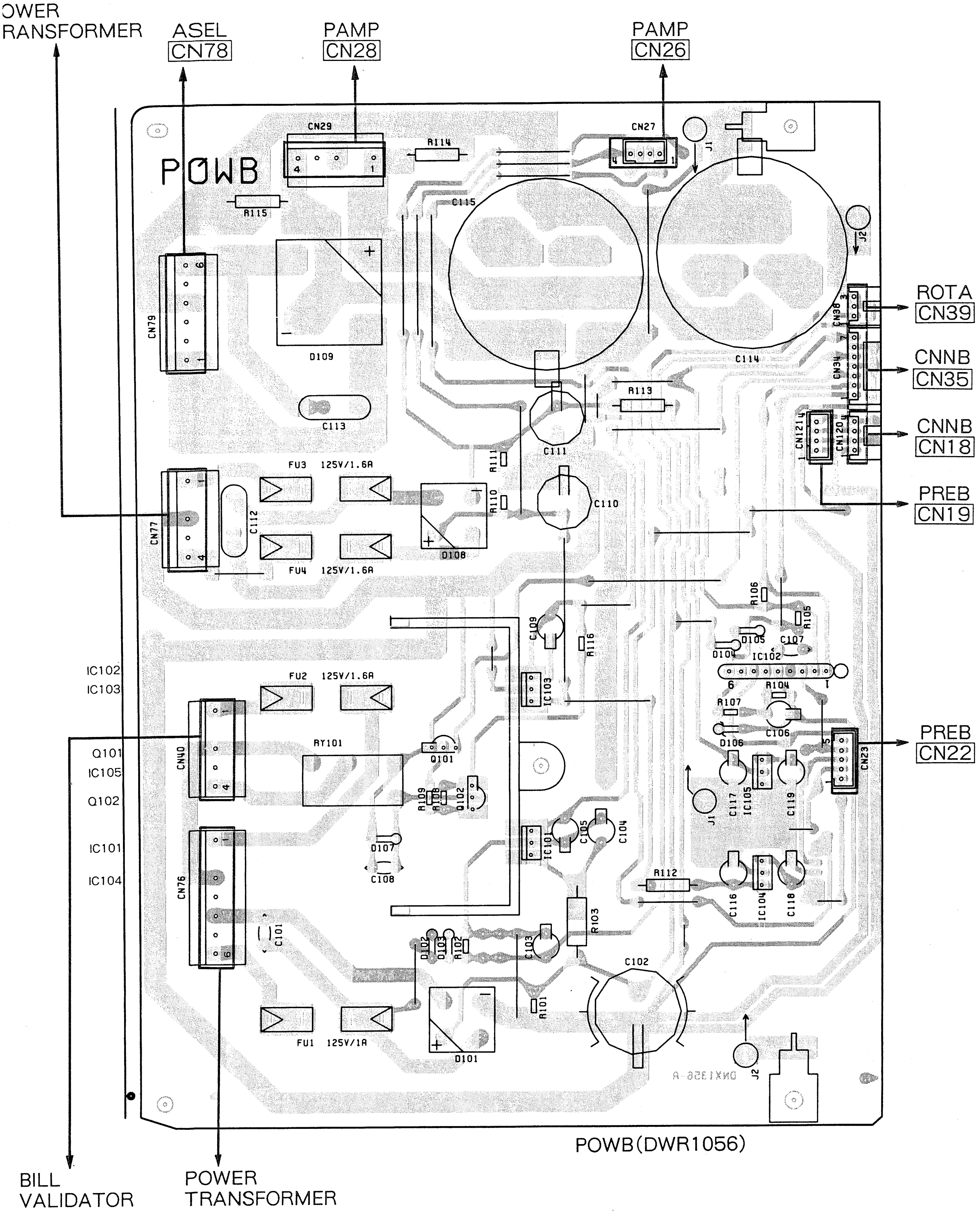

POWB
CN121
POWB
CN23
PREB(DWK1011)
LOJB
LINE OUT
AUDIO IN
PLAYER3
PLAYER2
PLAYER1
CDJB
DNX1368-A
PAMP
CN44
PAMP
CN25
VR1
IC2
VR2
IC1
VR3
Q1
IC3
Q2
DNX1354-A

4.1.5 POWB

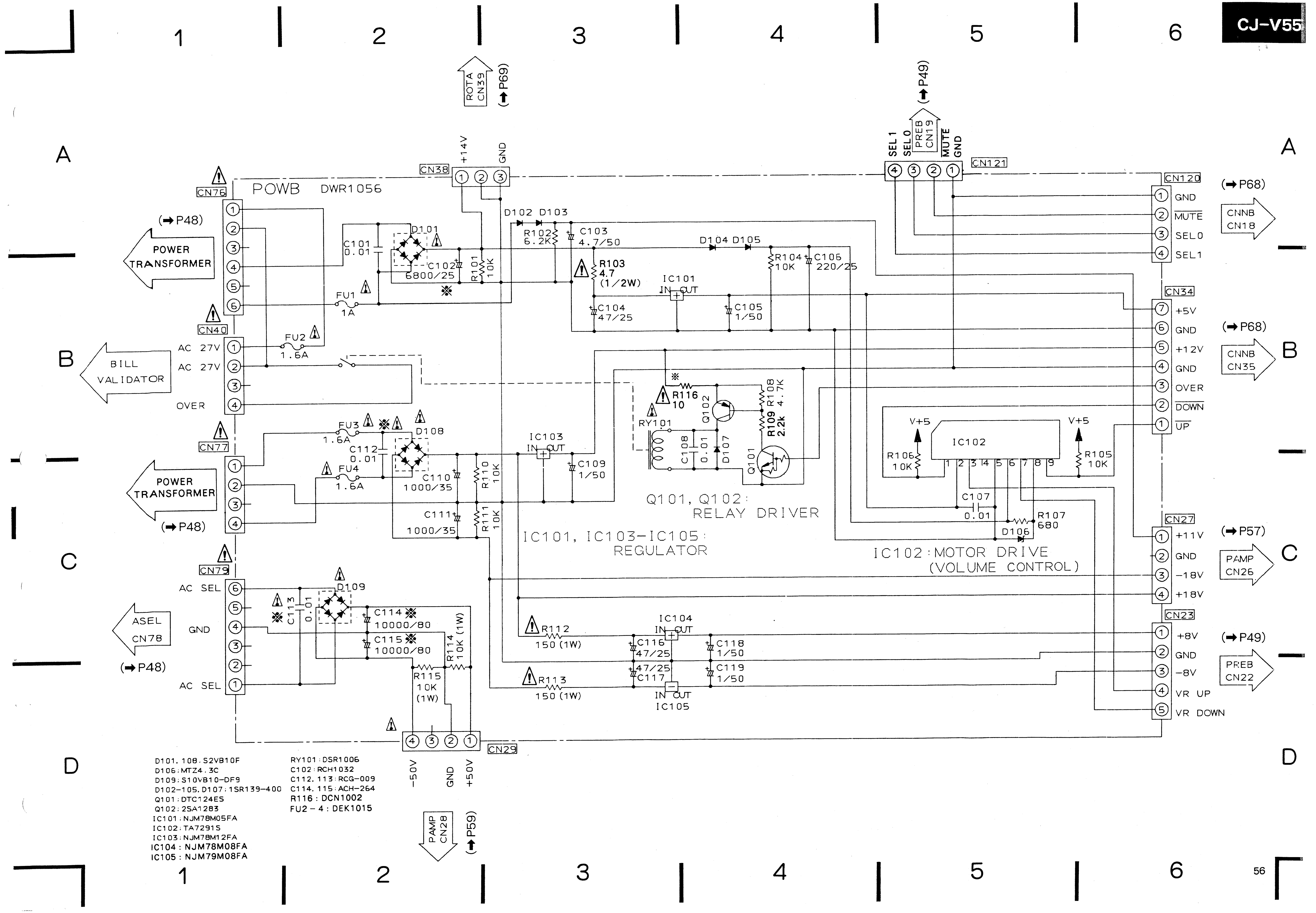

POWER TRANSFORMER
ASEL CN78
PAMP CN28
PAMP CN26
ROTA CN39
CNNB CN35
CNNB CN18
PREB CN19
PREB CN22
POWB
CN29
CN27
CN13
CN11
CN10
CN16
CN3
D109
D108
D101
C113
C112
C111
C110
C115
C114
C102
FU3 125V/1.6A
FU4 125V/1.6A
FU2 125V/1.6A
FU1 125V/1A
RY101
IC102
IC103
Q101
IC105
Q102
IC101
IC104
DNX1356-A
POWB(DWR1056)
POWER TRANSFORMER
BILL VALIDATOR

This P. C. B. connection diagram is viewed from the foil side.

4.1.5 POWB


OWER
RANSFORMER
ASEL
CN78
PAMP
CN28
PAMP
CN26
ROTA
CN39
CNNB
CN35
CNNB
CN18
PREB
CN19
PREB
CN22
BILL
VALIDATOR
POWER
TRANSFORMER
POWB
CN29
R114
CN27
J1
J2
R115
C115
CN79
D109
C114
CN38
CN34
R113
CN121
CN120
C113
C111
FU3 125V/1.6A
R111
R110
C110
CN77
C112
D108
FU4 125V/1.6A
R106
R105
C109
R116
D105
C107
D104
IC102
R104
R107
C106
D106
IC102
IC103
FU2 125V/1.6A
CN40
RY101
Q101
Q101
IC105
Q102
R109
R108
Q102
CN23
C117
IC105
C119
IC101
IC104
D107
C108
IC101
C105
C104
CN76
R112
C116
IC104
C118
C101
R103
D102
D103
R102
C103
C102
R101
FU1 125V/1A
D101
DNX1356-A

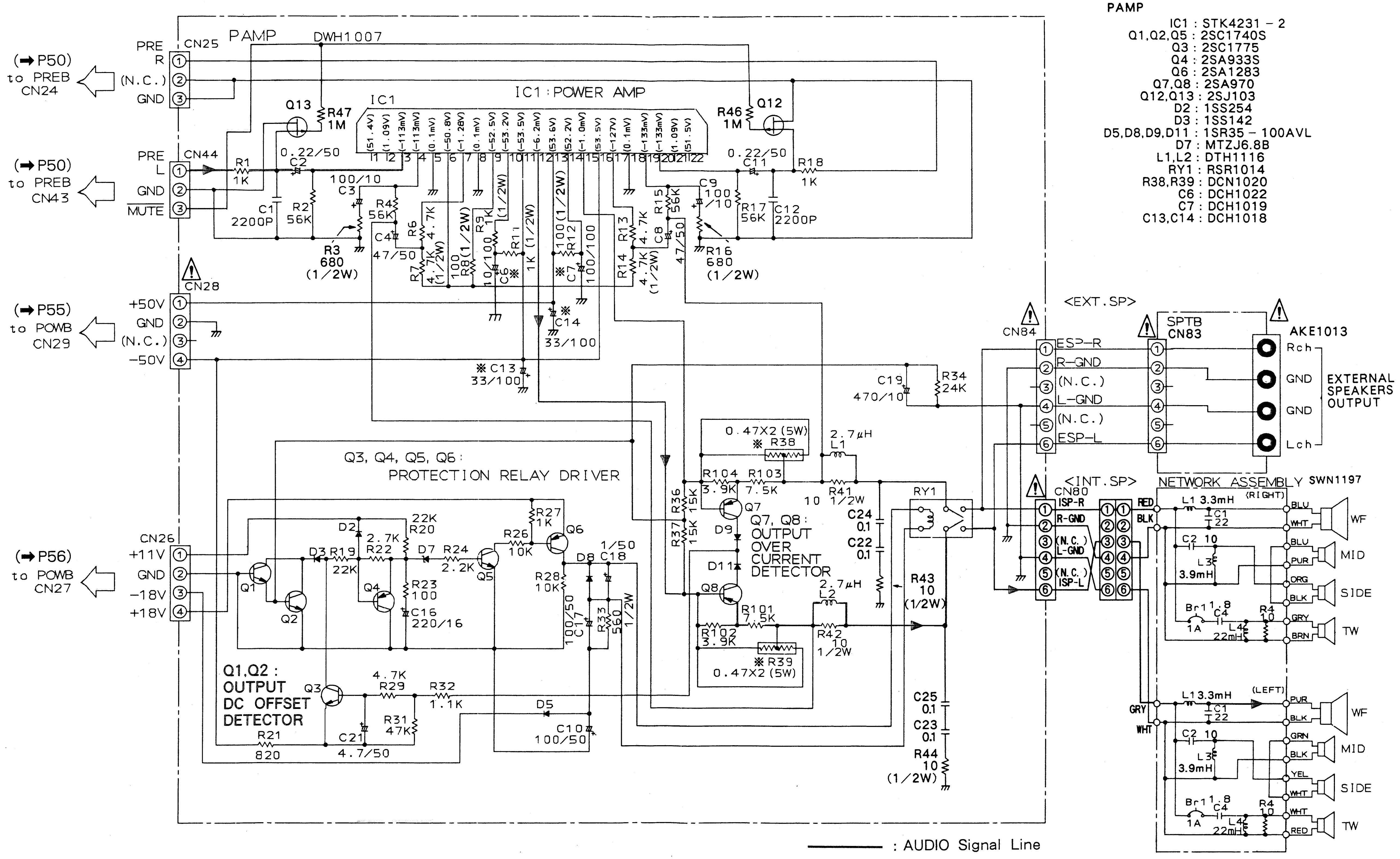
POWB(DWR1056)


1
2
3
4
5
6
A
B
C
D
POWB DWR1056
ROTA CN39
(➡P69)
CN38
+14V
GND
PREB CN19
(➡P49)
SEL 1
SEL 0
MUTE
GND
CN121
CN120
(➡P68)
GND
MUTE
SEL 0
SEL 1
CNNB CN18
CN76
(➡P48)
POWER TRANSFORMER
D101
C101 0.01
C102 6800/25
R101 10K
FU1 1A
D102 D103
R102 6.2K
C103 4.7/50
R103 4.7 (1/2W)
D104 D105
R104 10K
C106 220/25
IC101 IN OUT
C104 47/25
C105 1/50
CN34
+5V
GND
+12V
GND
OVER
DOWN
UP
(➡P68)
CNNB CN35
CN40
FU2 1.6A
AC 27V
AC 27V
OVER
BILL VALIDATOR
R116 10
RY101
C108 0.01
D107
Q102
Q101
R108 4.7K
R109 2.2k
V+5
V+5
IC102
R106 10K
R105 10K
C107 0.01
R107 680
D106
CN77
FU3 1.6A
FU4 1.6A
C112 0.01
D108
C110 1000/35
C111 1000/35
R110 10K
R111 10K
IC103 IN OUT
C109 1/50
POWER TRANSFORMER
(➡P48)
Q101, Q102: RELAY DRIVER
IC101, IC103–IC105: REGULATOR
IC102: MOTOR DRIVE (VOLUME CONTROL)
CN27
+11V
GND
–18V
+18V
(➡P57)
PAMP CN26
CN79
AC SEL
GND
AC SEL
ASEL CN78
(➡P48)
C113 0.01
D109
C114 10000/80
C115 10000/80
R114 10K (1W)
R115 10K (1W)
R112 150 (1W)
R113 150 (1W)
IC104 IN OUT
IC105 IN OUT
C116 47/25
C117 47/25
C118 1/50
C119 1/50
CN23
+8V
GND
–8V
VR UP
VR DOWN
(➡P49)
PREB CN22
CN29
–50V
GND
+50V
PAMP CN28
(➡P59)

D101, 108, S2VB10F
D106 : MTZ4.3C
D109 : S10VB10–DF9
D102–105, D107 : 1SR139–400
Q101 : DTC124ES
Q102 : 2SA1283
IC101 : NJM78M05FA
IC102 : TA7291S
IC103 : NJM78M12FA
IC104 : NJM78M08FA
IC105 : NJM79M08FA

RY101 : DSR1006
C102 : RCH1032
C112, 113 : RCG–009
C114, 115 : ACH–264
R116 : DCN1002
FU2 – 4 : DEK1015

4.1.6 PAMP, SPTB AND NETWORK ASSEMBLY

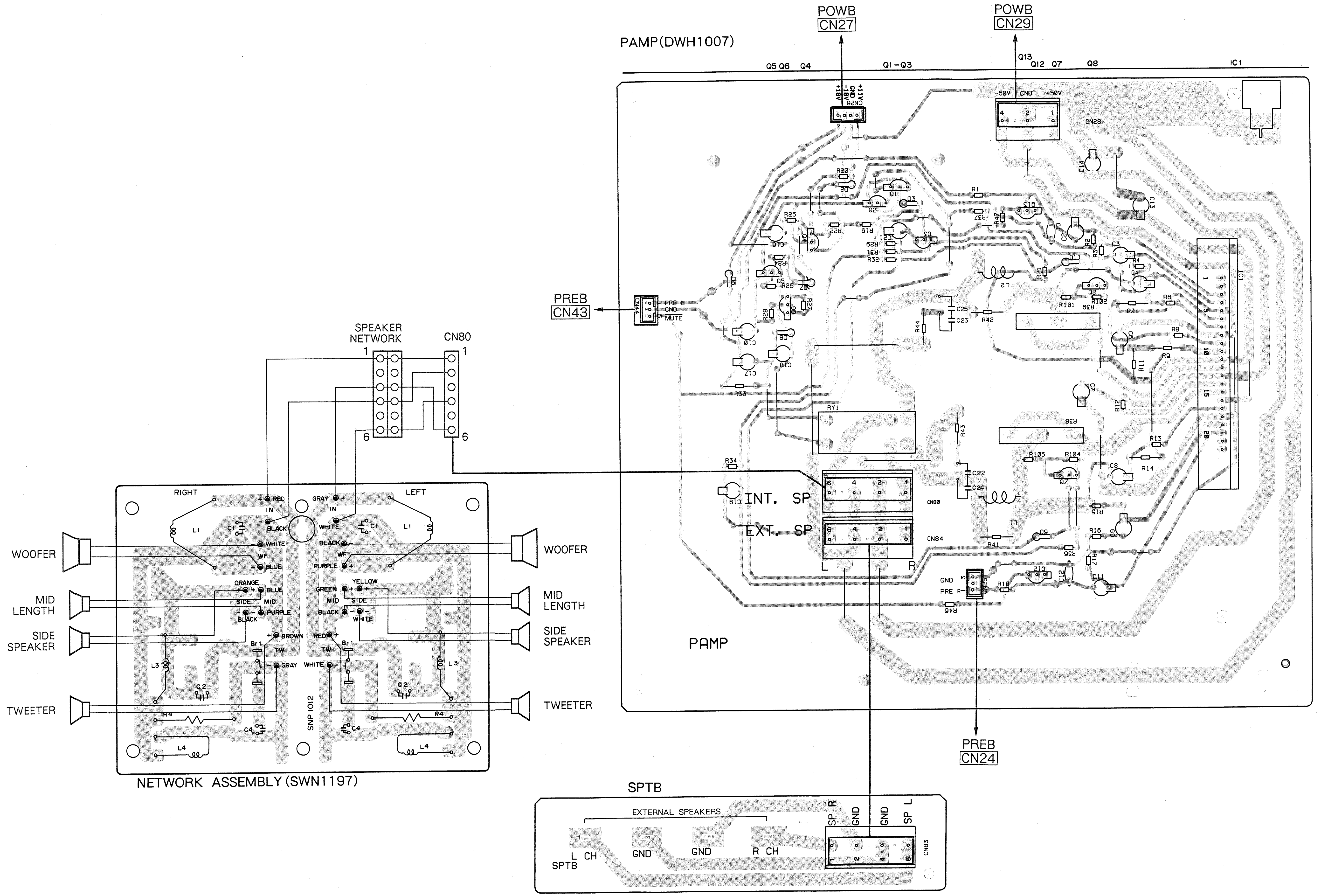

PAMP
DWH1007
IC1 : POWER AMP
IC1
PRE
CN25
R
(N.C.)
GND
(➡P50)
to PREB
CN24
PRE
CN44
L
GND
MUTE
(➡P50)
to PREB
CN43
CN28
+50V
GND
(N.C.)
−50V
(➡P55)
to POWB
CN29
CN26
+11V
GND
−18V
+18V
(➡P56)
to POWB
CN27
Q13
R47
1M
R46
1M
Q12
R1
1K
C2
0.22/50
C11
0.22/50
R18
1K
100/10
C3
C9
100/10
C1
2200P
R2
56K
R4
56K
R17
56K
C12
2200P
R3
680
(1/2W)
R16
680
(1/2W)
C4
47/50
C8
47/50
R6 4.7K
R7 4.7K (1/2W)
R8 (1/2W) 100
R9 1K (1/2W)
R10 100
C5 ※
R11 1K (1/2W)
R12 100 (1/2W)
C7 ※ 100/100
R13 4.7K
R14 4.7K (1/2W)
R15 56K
(51.4V)
(1.09V)
(−113mV)
(−113mV)
(0.1mV)
(−50.8V)
(−1.28V)
(0.1mV)
(−52.5V)
(−53.2V)
(−53.5V)
(−6.2mV)
(53.6V)
(52.2V)
(−1.0mV)
(53.5V)
(−127V)
(0.1mV)
(−133mV)
(−133mV)
(1.09V)
(51.5V)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
※ C14
33/100
※ C13
33/100
Q3, Q4, Q5, Q6 :
PROTECTION RELAY DRIVER
D2
D3
R19
22K
2.7K
R22
22K
R20
D7
R24
2.2K
R27
1K
R26
10K
Q6
Q5
Q4
Q1
Q2
R23
100
C16
220/16
R28
10K
D8
C18
1/50
100/50
C17
R33
560
1/2W
Q1,Q2 :
OUTPUT
DC OFFSET
DETECTOR
Q3
4.7K
R29
R32
1.1K
R31
47K
C21
4.7/50
R21
820
D5
C10
100/50
0.47X2 (5W)
※ R38
R104
3.9K
R103
7.5K
Q7
D9
D11
Q8
Q7, Q8 :
OUTPUT
OVER
CURRENT
DETECTOR
R36
15K
R37
15K
R101
7.5K
R102
3.9K
※ R39
0.47X2 (5W)
2.7μH
L1
R41
10 1/2W
2.7μH
L2
R42
10
1/2W
C24
0.1
C22
0.1
R43
10
(1/2W)
C25
0.1
C23
0.1
R44
10
(1/2W)
RY1
C19
470/10
R34
24K
CN84
<EXT.SP>
ESP-R
R-GND
(N.C.)
L-GND
(N.C.)
ESP-L
SPTB
CN83
AKE1013
Rch
GND
GND
Lch
EXTERNAL
SPEAKERS
OUTPUT
<INT.SP>
CN80
ISP-R
R-GND
(N.C.)
L-GND
(N.C.)
ISP-L
NETWORK ASSEMBLY SWN1197
(RIGHT)
RED
BLK
L1 3.3mH
C1
22
BLU
WHT
WF
C2 10
L3
3.9mH
BLU
PUR
MID
ORG
BLK
SIDE
Br1
1A
1.8
C4
R4
10
L4
22mH
GRY
BRN
TW
(LEFT)
GRY
WHT
L1 3.3mH
C1
22
PUR
BLK
WF
C2 10
L3
3.9mH
GRN
BLK
MID
YEL
WHT
SIDE
Br1
1A
1.8
C4
R4
10
L4
22mH
WHT
RED
TW
: AUDIO Signal Line

PAMP

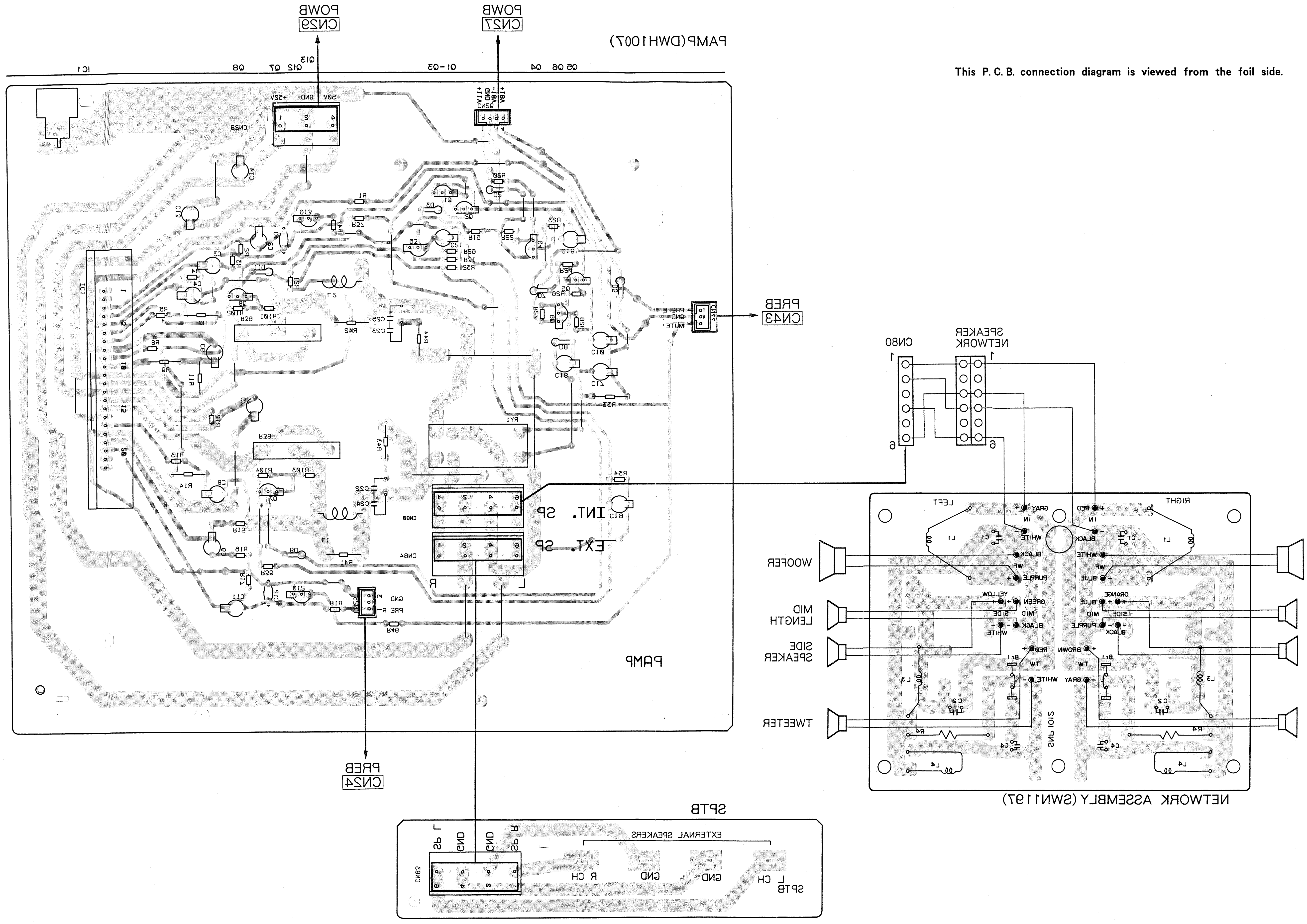
IC1 : STK4231 − 2
Q1,Q2,Q5 : 2SC1740S
Q3 : 2SC1775
Q4 : 2SA933S
Q6 : 2SA1283
Q7,Q8 : 2SA970
Q12,Q13 : 2SJ103
D2 : 1SS254
D3 : 1SS142
D5,D8,D9,D11 : 1SR35 − 100AVL
D7 : MTZJ6.8B
L1,L2 : DTH1116
RY1 : RSR1014
R38,R39 : DCN1020
C6 : DCH1022
C7 : DCH1019
C13,C14 : DCH1018

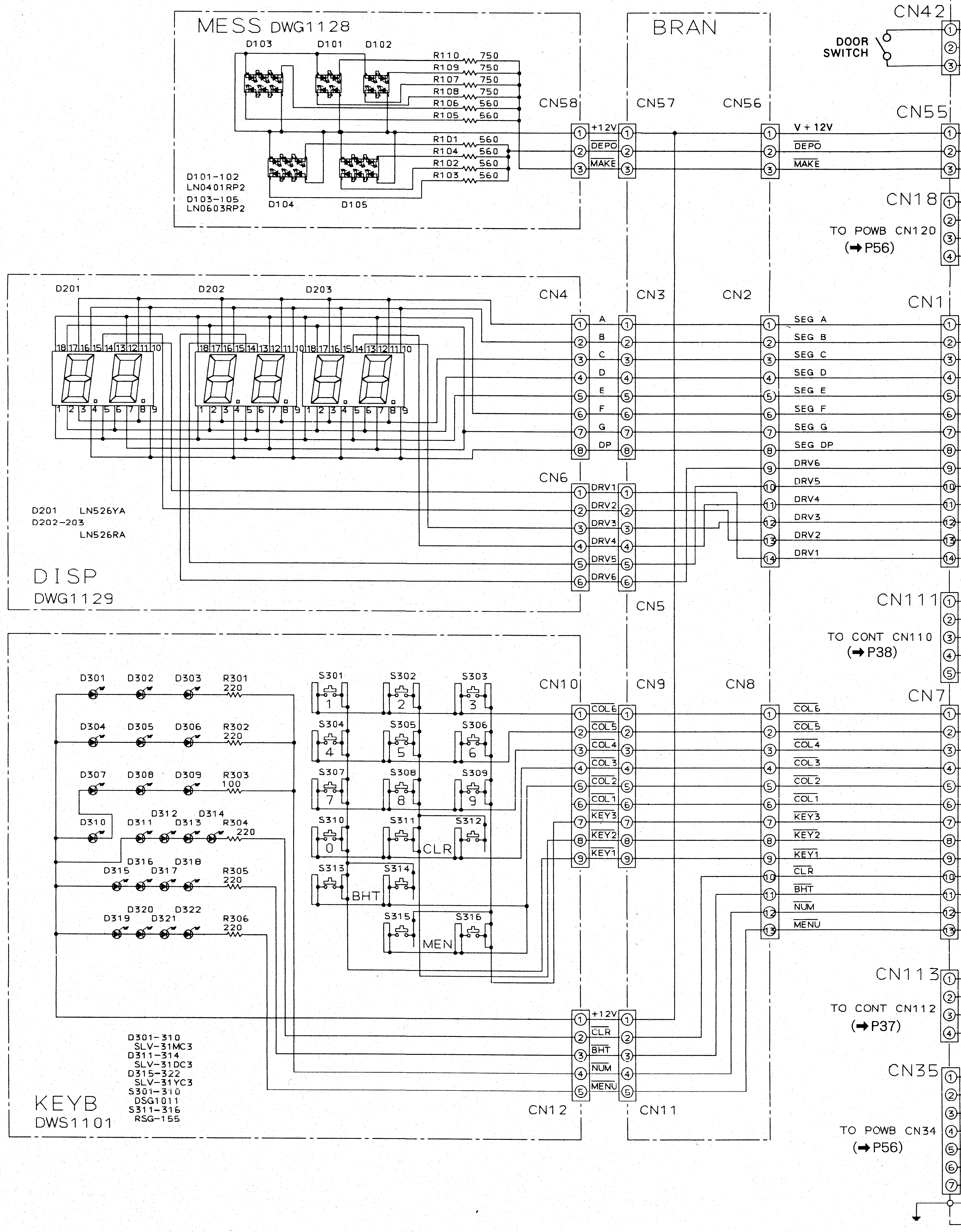
NETWORK ASSEMBLY

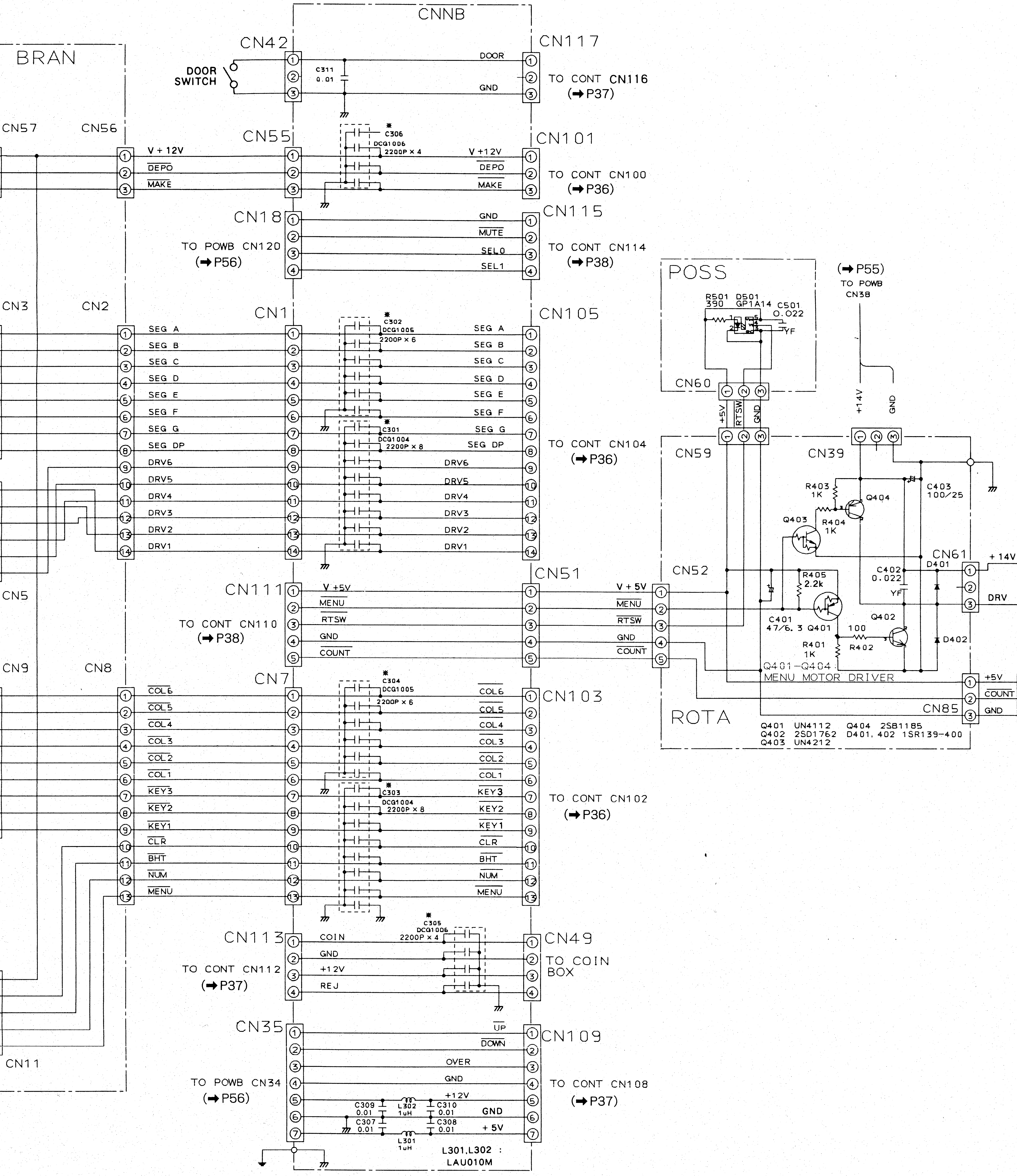
L1 : STH1100
L3 : STH1021
L4 : STH − 327
Br1 : SSG − 004

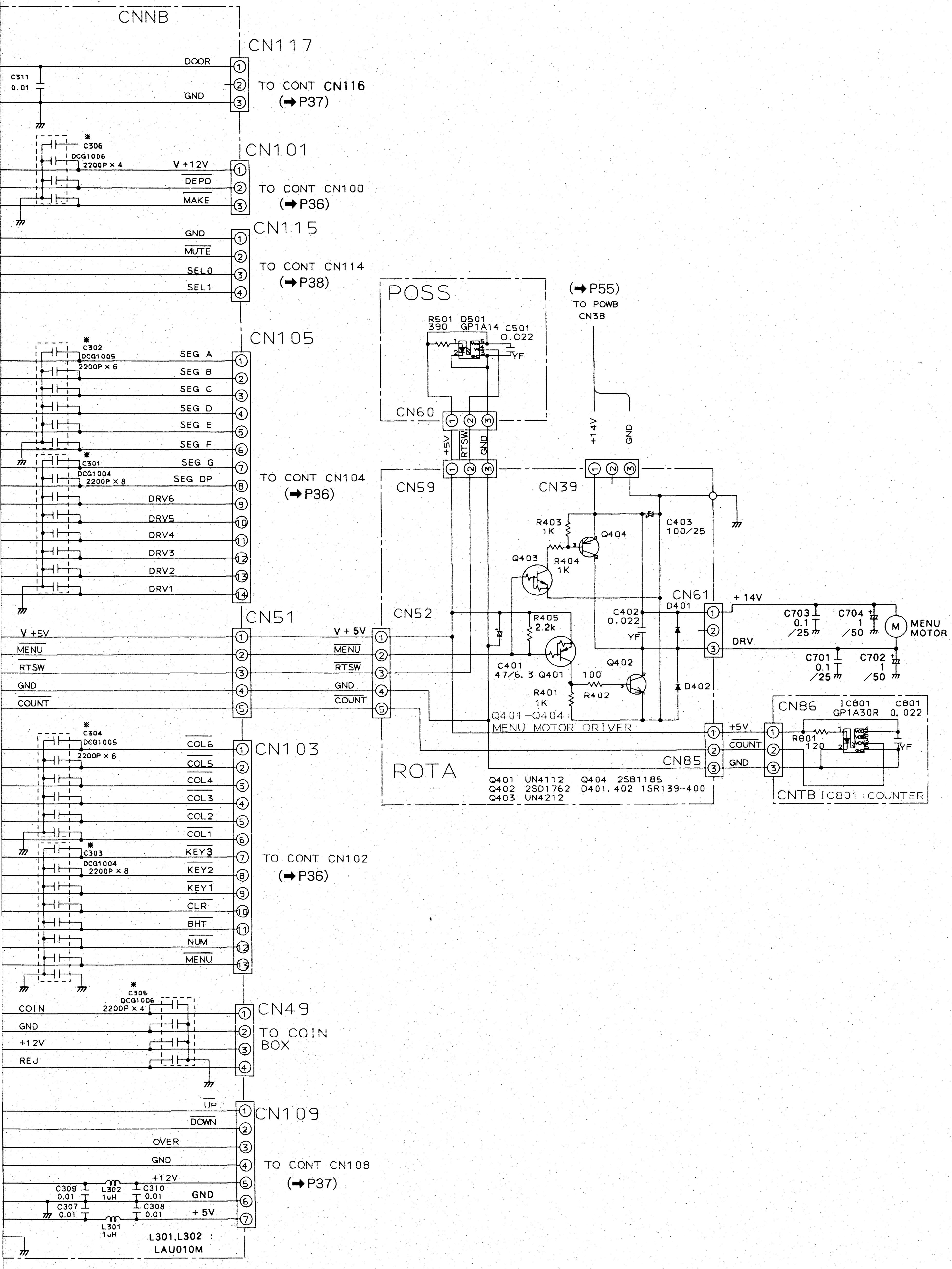

POWB
CN27
POWB
CN29
PAMP(DWH1007)
Q5 Q6
Q4
Q1-Q3
Q13
Q12
Q7
Q8
IC1
-50V
GND
+50V
CN28
CN26
PREB
CN43
CN44
PRE L
GND
MUTE
SPEAKER NETWORK
CN80
1
6
RY1
INT. SP
EXT. SP
CN80
CN84
L
R
GND
PRE R
CN25
PAMP
PREB
CN24
RIGHT
LEFT
RED
IN
BLACK
WHITE
WF
BLUE
GRAY
PURPLE
ORANGE
SIDE
MID
YELLOW
GREEN
BROWN
TW
Br1
L1
L3
L4
C1
C2
C4
R4
SNP1012
WOOFER
MID LENGTH
SIDE SPEAKER
TWEETER
WOOFER
MID LENGTH
SIDE SPEAKER
TWEETER
NETWORK ASSEMBLY (SWN1197)
SPTB
EXTERNAL SPEAKERS
L CH
GND
GND
R CH
SPTB
SP R
GND
GND
SP L
CN83

This P. C. B. connection diagram is viewed from the foil side.

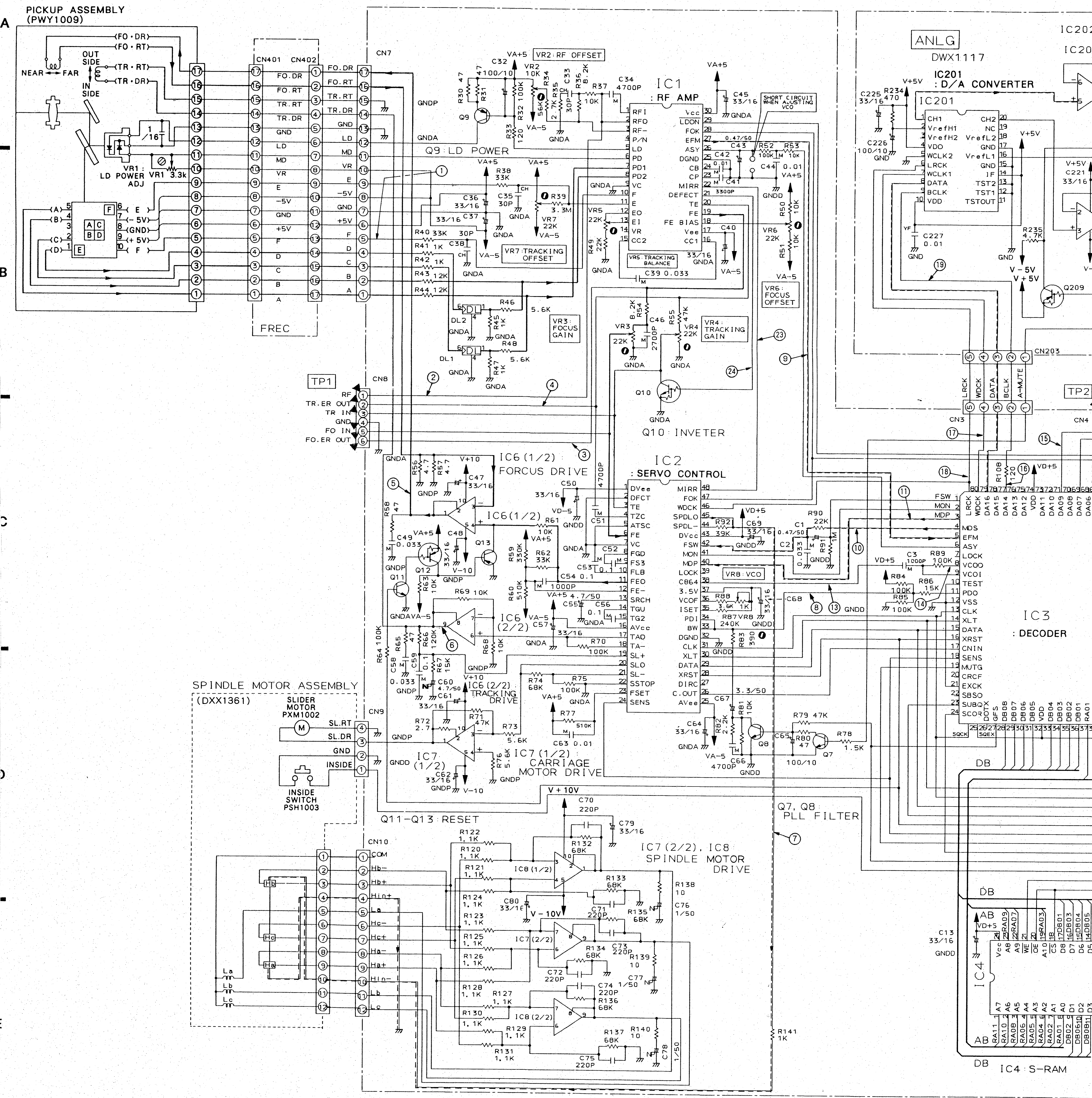

POWB
CN29
POWB
CN27
PAMP(DWH1007)
IC1
Q8
Q7
Q12
Q13
Q1–Q3
Q4
Q5 Q6
CN28
CN26
-50V
GND
+50V
+11V
GND
-18V
+18V
PREB
CN43
PRE
GND
MUTE
CN44
RY1
CN80
INT. SP
CN84
EXT. SP
R
L
PRE R
PRE L
GND
CN25
PAMP
PREB
CN24
SPEAKER
NETWORK
CN80
SPTB
EXTERNAL SPEAKERS
R CH
GND
GND
L CH
SPTB
SP R
GND
GND
SP L
CN82
LEFT
RIGHT
IN
GRAY
RED
WHITE
BLACK
WF
PURPLE
BLUE
YELLOW
ORANGE
GREEN
MID
SIDE
BROWN
TW
WOOFER
MID
LENGTH
SIDE
SPEAKER
TWEETER
NETWORK ASSEMBLY (SWN1197)


MESS DWG1128
D103
D101
D102
R110 750
R109 750
R107 750
R108 750
R106 560
R105 560
R101 560
R104 560
R102 560
R103 560
D101-102
LN0401RP2
D103-105
LN0603RP2
D104
D105
CN58
+12V
DEPO
MAKE
BRAN
CN57
CN56
V + 12V
DEPO
MAKE
CN42
DOOR SWITCH
CN55
CN18
TO POWB CN120
(➡P56)
D201
D202
D203
CN4
CN3
CN2
CN1
A
B
C
D
E
F
G
DP
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
CN6
DRV1
DRV2
DRV3
DRV4
DRV5
DRV6
D201 LN526YA
D202-203
LN526RA
DISP
DWG1129
CN5
CN111
TO CONT CN110
(➡P38)
D301
D302
D303
R301 220
D304
D305
D306
R302 220
D307
D308
D309
R303 100
D310
D311
D312
D313
D314
R304 220
D315
D316
D317
D318
R305 220
D319
D320
D321
D322
R306 220
S301 1
S302 2
S303 3
S304 4
S305 5
S306 6
S307 7
S308 8
S309 9
S310 0
S311
CLR
S312
S313
S314
BHT
S315
S316
MEN
CN10
CN9
CN8
CN7
COL6
COL5
COL4
COL3
COL2
COL1
KEY3
KEY2
KEY1
CLR
BHT
NUM
MENU
+12V
CLR
BHT
NUM
MENU
CN12
CN11
CN113
TO CONT CN112
(➡P37)
CN35
TO POWB CN34
(➡P56)
D301-310
SLV-31MC3
D311-314
SLV-31DC3
D315-322
SLV-31YC3
S301-310
DSG1011
S311-316
RSG-155
KEYB
DWS1101


BRAN
CNNB
POSS
ROTA
CN57
CN56
CN3
CN2
CN5
CN9
CN8
CN11
CN42
CN117
DOOR SWITCH
DOOR
GND
C311 0.01
TO CONT CN116 (➡P37)
CN55
CN101
C306 DCQ1006 2200P × 4
V + 12V
DEPO
MAKE
TO CONT CN100 (➡P36)
CN18
CN115
MUTE
SEL0
SEL1
TO POWB CN120 (➡P56)
TO CONT CN114 (➡P38)
CN1
CN105
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
C302 DCQ1005 2200P × 6
C301 DCQ1004 2200P × 8
TO CONT CN104 (➡P36)
CN111
CN51
V +5V
MENU
RTSW
COUNT
TO CONT CN110 (➡P38)
CN7
CN103
COL6
COL5
COL4
COL3
COL2
COL1
KEY3
KEY2
KEY1
CLR
BHT
NUM
C304 DCQ1005 2200P × 6
C303 DCQ1004 2200P × 8
TO CONT CN102 (➡P36)
CN113
CN49
COIN
+12V
REJ
C305 DCQ1006 2200P × 4
TO CONT CN112 (➡P37)
TO COIN BOX
CN35
CN109
UP
DOWN
OVER
+ 5V
C309 0.01
C307 0.01
L302 1uH
L301 1uH
C310 0.01
C308 0.01
L301,L302 : LAU010M
TO POWB CN34 (➡P56)
TO CONT CN108 (➡P37)
R501 390
D501 GP1A14
C501 0.022
YF
CN60
+5V
(➡P55) TO POWB CN38
+14V
CN59
CN39
CN52
R403 1K
Q404
C403 100/25
Q403
R404 1K
CN61
D401
+ 14V
R405 2.2k
C402 0.022
DRV
C401 47/6. 3
Q401
Q402
100
R402
R401 1K
D402
Q401–Q404 : MENU MOTOR DRIVER
CN85
Q401 UN4112
Q402 2SD1762
Q403 UN4212
Q404 2SB1185
D401, 402 1SR139-400
4
5
6
7
8


5
6
7
8
9
A
B
C
D
E
F
CNNB
CN117
DOOR
GND
C311
0.01
TO CONT CN116
(➡P37)
C306
DCG1006
2200P × 4
V +12V
DEPO
MAKE
CN101
TO CONT CN100
(➡P36)
CN115
GND
MUTE
SEL0
SEL1
TO CONT CN114
(➡P38)
CN105
C302
DCG1005
2200P × 6
SEG A
SEG B
SEG C
SEG D
SEG E
SEG F
SEG G
SEG DP
C301
DCG1004
2200P × 8
DRV6
DRV5
DRV4
DRV3
DRV2
DRV1
TO CONT CN104
(➡P36)
CN51
V +5V
MENU
RTSW
GND
COUNT
C304
DCG1005
2200P × 6
COL6
COL5
COL4
COL3
COL2
COL1
C303
DCG1004
2200P × 8
KEY3
KEY2
KEY1
CLR
BHT
NUM
MENU
CN103
TO CONT CN102
(➡P36)
C305
DCG1006
2200P × 4
COIN
GND
+12V
REJ
CN49
TO COIN BOX
UP
DOWN
OVER
GND
+12V
GND
+ 5V
CN109
TO CONT CN108
(➡P37)
C309
0.01
L302
1uH
C310
0.01
C307
0.01
C308
0.01
L301
1uH
L301.L302 :
LAU010M
POSS
R501
390
D501
GP1A14
C501
0.022
YF
CN60
+5V
RTSW
GND
CN59
(➡P55)
TO POWB
CN38
+14V
GND
CN39
R403
1K
Q404
C403
100/25
Q403
R404
1K
CN52
V + 5V
MENU
RTSW
GND
COUNT
R405
2.2k
C401
47/6.3
Q401
CN61
D401
C402
0.022
YF
Q402
100
R402
R401
1K
D402
+ 14V
DRV
C703
0.1
/25
C704
1
/50
C701
0.1
/25
C702
1
/50
M
MENU
MOTOR
Q401–Q404 :
MENU MOTOR DRIVER
CN85
+5V
COUNT
GND
ROTA
Q401 UN4112
Q402 2SD1762
Q403 UN4212
Q404 2SB1185
D401, 402 1SR139-400
CN86
IC801
GP1A30R
C801
0.022
R801
120
YF
CNTB IC801 : COUNTER

4.2 CD SECTION


PICKUP ASSEMBLY (PWY1009)
NEAR ← → FAR
OUT SIDE
IN SIDE
VR1 : LD POWER ADJ
VR1 3.3k
FREC
CN401
CN402
CN7
CN8
CN9
CN10
TP1
RF
TR.ER OUT
TR IN
GND
FO IN
FO.ER OUT
Q9 : LD POWER
VR2 : RF OFFSET
VR3 : FOCUS GAIN
VR4 : TRACKING GAIN
VR5 : TRACKING BALANCE
VR6 : FOCUS OFFSET
VR7 : TRACKING OFFSET
VR8 : VCO
SHORT CIRCUIT WHEN ALJSTING VCO
IC1 : RF AMP
IC2 : SERVO CONTROL
IC3 : DECODER
IC4 : S-RAM
Q10 : INVETER
IC6 (1/2) : FORCUS DRIVE
IC6 (2/2) : TRACKING DRIVE
IC7 (1/2) : CARRIAGE MOTOR DRIVE
IC7 (2/2), IC8 : SPINDLE MOTOR DRIVE
Q11 - Q13 : RESET
Q7, Q8 : PLL FILTER
SPINDLE MOTOR ASSEMBLY (DXX1361)
SLIDER MOTOR PXM1002
INSIDE SWITCH PSH1003
ANLG
DWX1117
IC201 : D/A CONVERTER
CN203
CN3
CN4
TP2
LRCK
WDCK
DATA
BCLK
A-MUTE

DEGT

IC1 : CXA1081S
IC2 : CXA1082AS
IC3 : CXD1135QZ
IC4 : CXK5816PN − 12L
IC5 : PD0068
IC6 − IC8, IC10 : TA7256P
IC11 : M51953BL

Q1, Q3, Q5, Q12, Q14 : DTA124ES
Q2, Q4, Q6, Q15 : 2SC2497
Q7, Q8, Q11 : 2SC1740S
Q9 : 2SA1399
Q10, Q16 : DTC124ES
Q13 : 2SA933S

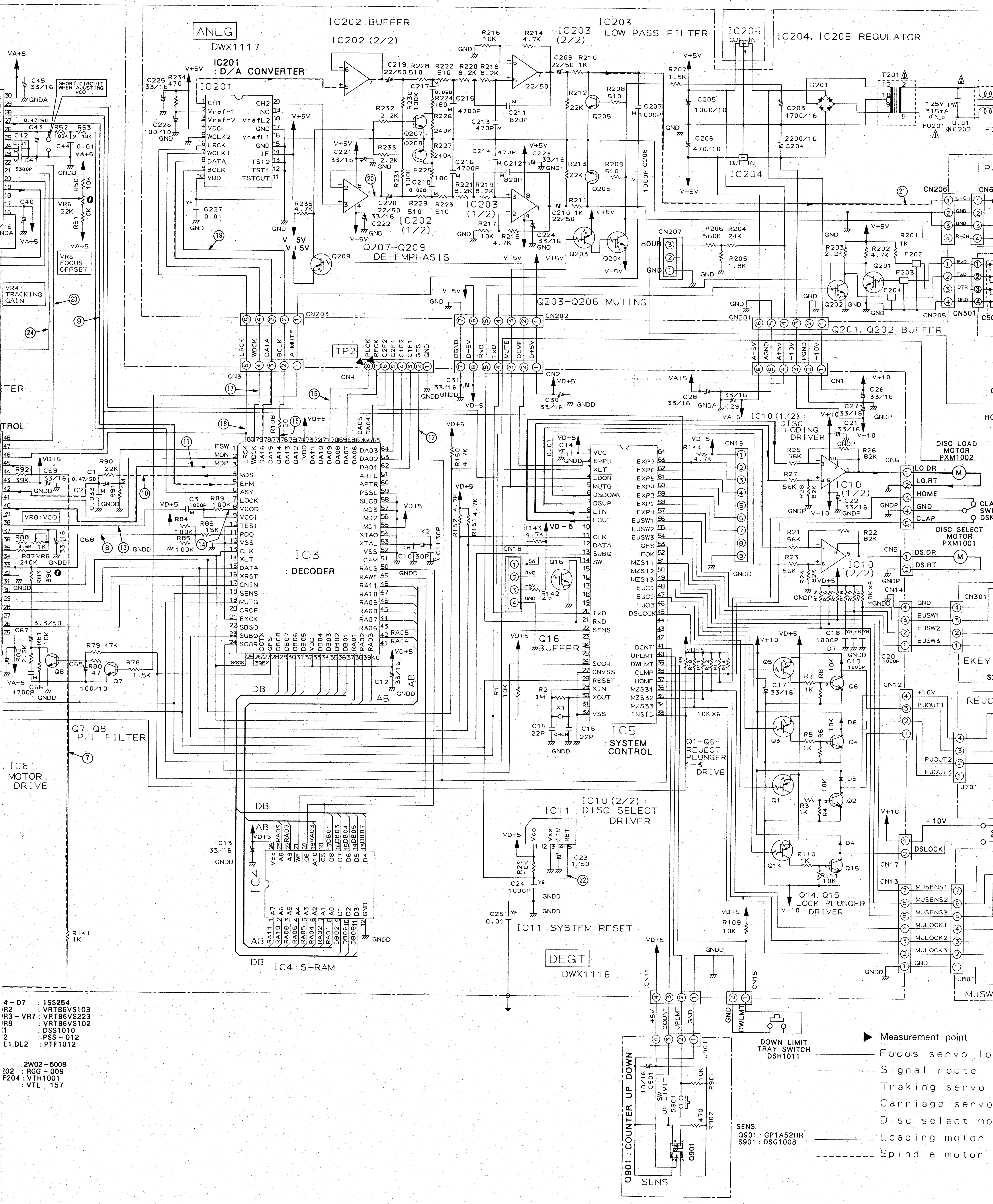
D4 − D7 : 1SS254
VR2 : VRTB6VS103
VR3 − VR7 : VRTB6VS223
VR8 : VRTB6VS102
X1 : DSS1010
X2 : PSS − 012
DL1, DL2 : PTF1012

ANLG

IC201 : LC7881
IC202, IC203 : NJM4558D
IC204 : NJM79L05A
IC205 : NJM7805FA

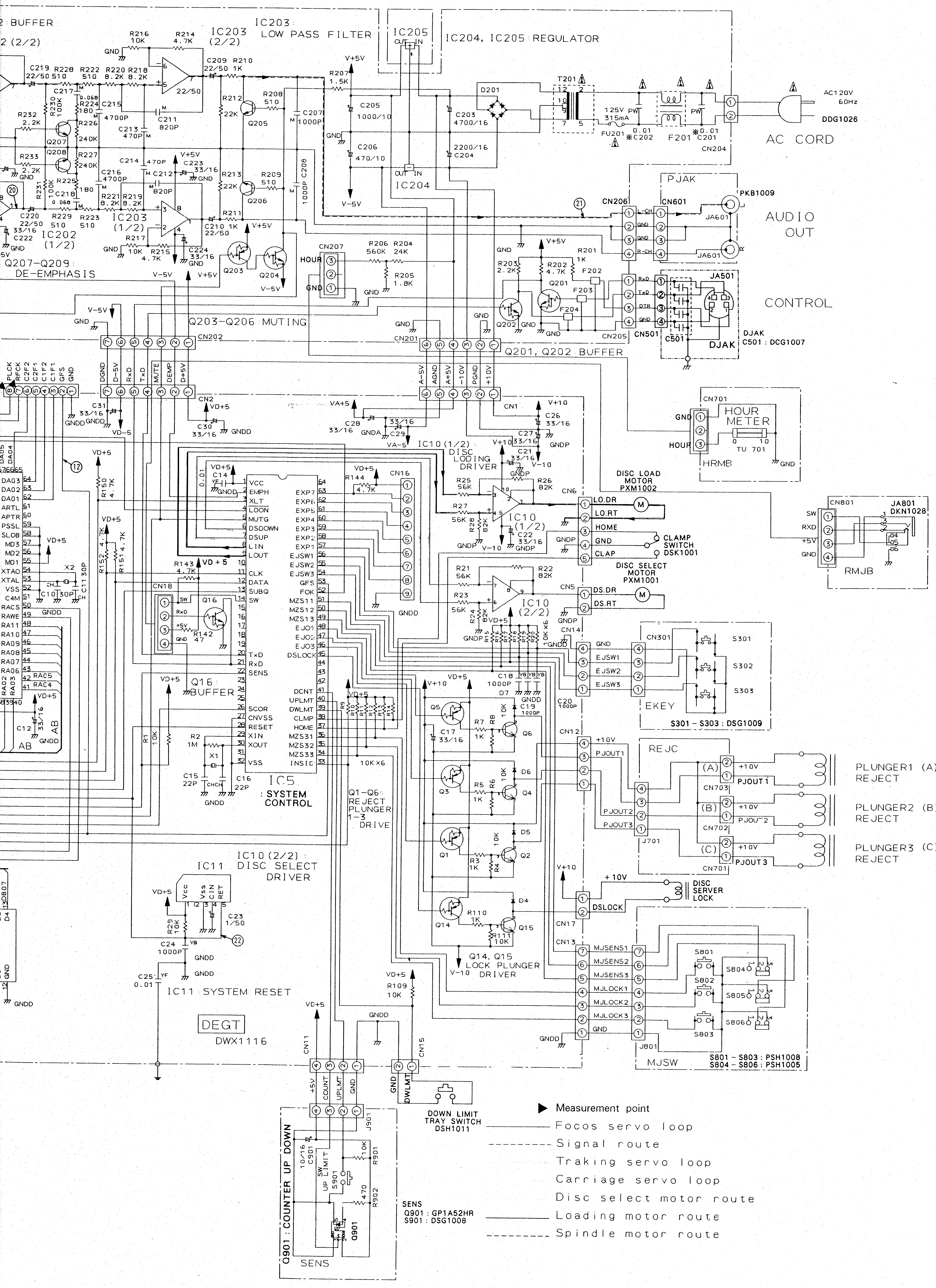
Q201, Q202, Q204 : DTC124ES
Q203, Q209 : DTA124ES
Q205, Q206 : 2SD1302
Q207, Q208 : 2SC1740S

D201 : 2W02 − 5008
C201, C202 : RCG − 009
F202 − F204 : VTH1001
L201 : VTL − 157

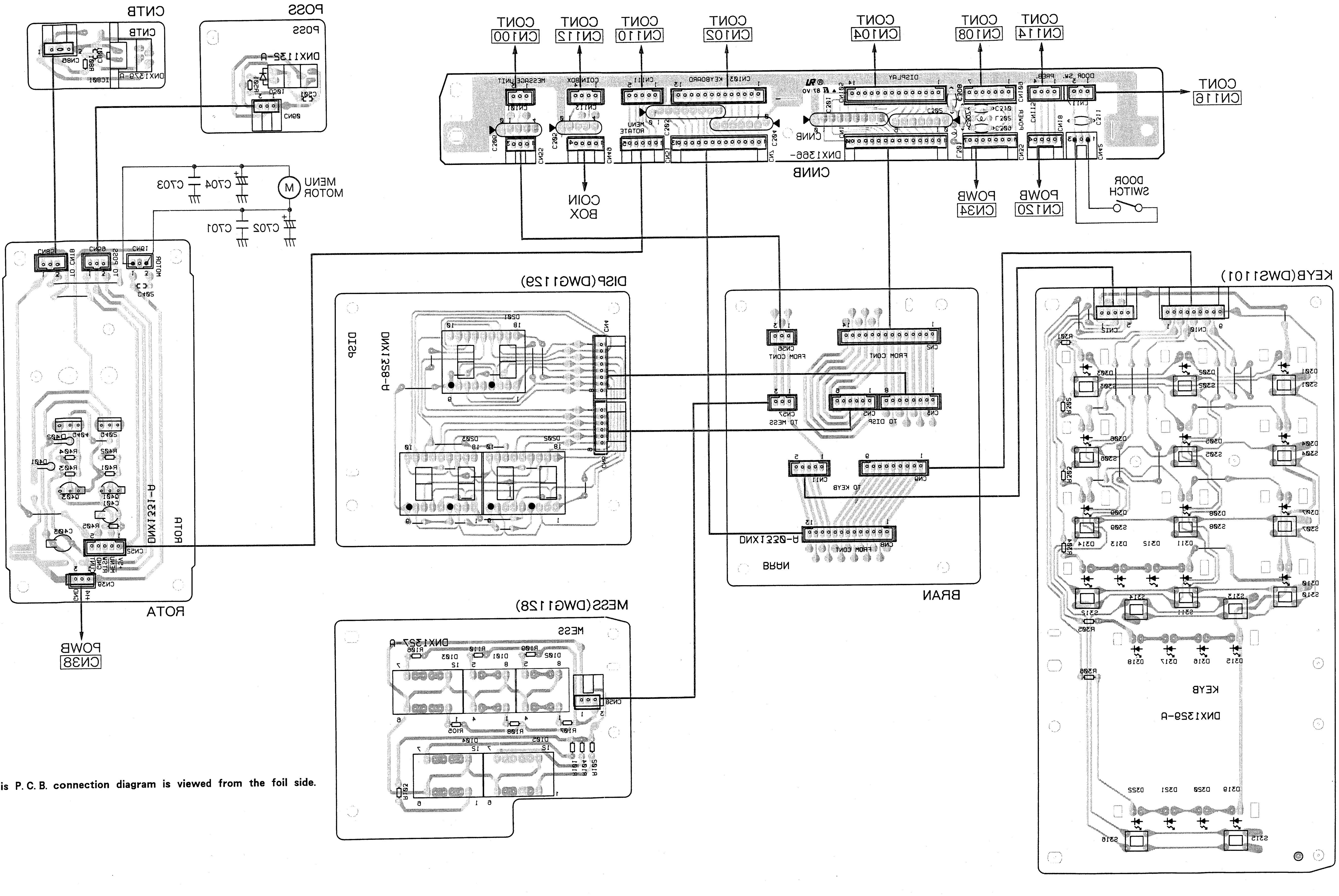

ANLG
DWX1117
IC201 : D/A CONVERTER
IC202 BUFFER
IC202 (2/2)
IC202 (1/2)
IC203 (2/2)
IC203 (1/2)
IC203 LOW PASS FILTER
IC205
IC204
IC204, IC205 REGULATOR
Q207–Q209 DE-EMPHASIS
Q203–Q206 MUTING
Q201, Q202 BUFFER
CN203
CN202
CN201
CN206
CN207
CN205
CN501
HOUR
TP2
CN3
CN4
CN2
CN1
LRCK
WDCK
DATA
BCLK
A-MUTE
PLCK
RFCK
C2F2
C2F1
C1F2
C1F1
GFS
GND
DGND
D-5V
RxD
TxD
MUTE
DEMP
D+5V
A-5V
AGND
A+5V
-10V
PGND
+10V
IC3 : DECODER
IC5 : SYSTEM CONTROL
IC4 S-RAM
IC10 (1/2) DISC LODING DRIVER
IC10 (2/2)
IC11 DISC SELECT DRIVER
IC11 SYSTEM RESET
Q16 BUFFER
Q1–Q6 REJECT PLUNGER 1–3 DRIVE
Q14, Q15 LOCK PLUNGER DRIVER
Q7, Q8 PLL FILTER
IC8 MOTOR DRIVE
VR8 : VCO
VR6 : FOCUS OFFSET
VR4 : TRACKING GAIN
SHORT CIRCUIT WHEN AJUSTING VCO
DISC LOAD MOTOR PXM1002
DISC SELECT MOTOR PXM1001
LO.DR
LO.RT
HOME
CLAP
DS.DR
DS.RT
CN6
CN5
CN14
CN16
CN18
CN13
CN17
CN12
CN301
EJSW1
EJSW2
EJSW3
EKEY
REJ
PJOUT1
PJOUT2
PJOUT3
J701
DSLOCK
+10V
MJSENS1
MJSENS2
MJSENS3
MJLOCK1
MJLOCK2
MJLOCK3
J801
MJSW
DEGT
DWX1116
CN11
CN15
+5V
COUNT
UPLMT
DWLMT
J901
DOWN LIMIT TRAY SWITCH DSH1011
Q901 : COUNTER UP DOWN
SENS
UP LIMIT
SW S901
SENS
Q901 : GP1A52HR
S901 : DSG1008
T201
FU201 125V PW 315mA
D201
TER
TROL
▶ Measurement point
Focos servo lo
Signal route
Traking servo
Carriage servo
Disc select mo
Loading motor
Spindle motor

4 – D7 : 1SS254
R2 : VRTB6VS103
R3 – VR7 : VRTB6VS223
R8 : VRTB6VS102
1 : DSS1010
2 : PSS – 012
L1, DL2 : PTF1012

: 2W02 – 5008
202 : RCG – 009
F204 : VTH1001
: VTL – 157

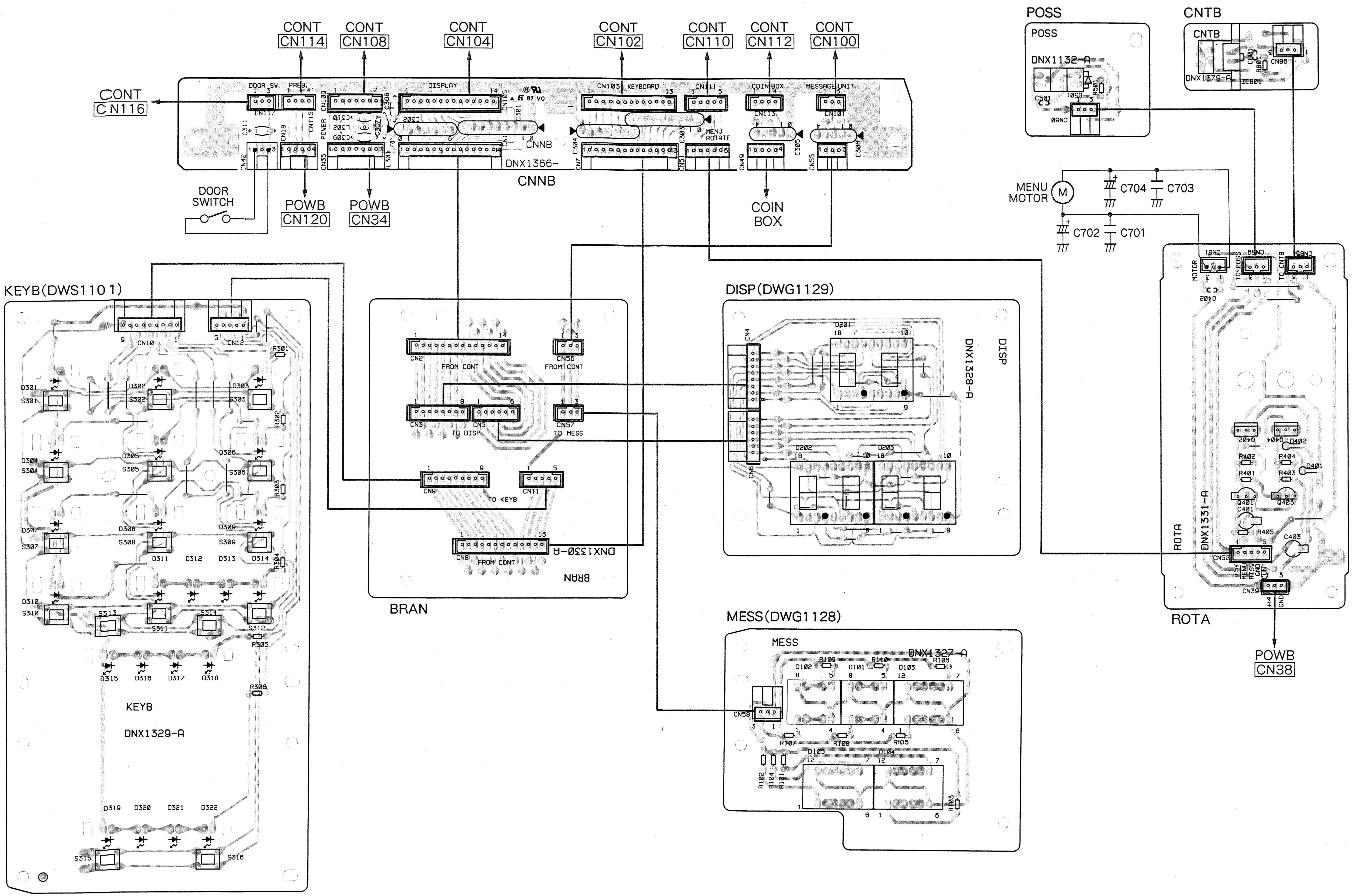

IC203 LOW PASS FILTER
IC203 (2/2)
IC203 (1/2)
IC202 (1/2)
2 BUFFER
2 (2/2)
Q207–Q209 DE-EMPHASIS
IC205
IC204
IC204, IC205 REGULATOR
T201
D201
FU201 125V 315mA
F201
CN204
AC120V 60Hz
DDG1026
AC CORD
CN206
CN601
PJAK
PKB1009
JA601
AUDIO OUT
CN207
HOUR
GND
Q203–Q206 MUTING
CN202
CN201
Q201, Q202 BUFFER
CN205
CN501
C501
JA501
DJAK
DJAK C501 : DCG1007
CONTROL
CN701
HOUR METER
TU 701
HRMB
CN801
JA801 DKN1028
RMJB
SW
RXD
+5V
PLCK
RFCK
C2F2
C2F1
C1F2
C1F1
GFS
DGND
D-5V
RxD
TxD
MUTE
DEMP
D+5V
CN2
A-5V
AGND
A+5V
-10V
PGND
+10V
CN1
IC10 (1/2) DISC LODING DRIVER
IC10 (2/2)
DISC LOAD MOTOR PXM1002
LO.DR
LO.RT
HOME
CLAP
CLAMP SWITCH DSK1001
CN6
DISC SELECT MOTOR PXM1001
DS.DR
DS.RT
CN5
CN16
CN14
EJSW1
EJSW2
EJSW3
CN301
S301
S302
S303
EKEY
S301 – S303 : DSG1009
IC5 : SYSTEM CONTROL
Q16 BUFFER
CN18
Q1–Q6 REJECT PLUNGER 1–3 DRIVE
CN12
PJOUT1
PJOUT2
PJOUT3
REJC
J701
CN703
CN702
CN701
PLUNGER1 (A) REJECT
PLUNGER2 (B) REJECT
PLUNGER3 (C) REJECT
CN17
DSLOCK
DISC SERVER LOCK
Q14, Q15 LOCK PLUNGER DRIVER
CN13
MJSENS1
MJSENS2
MJSENS3
MJLOCK1
MJLOCK2
MJLOCK3
J801
S801
S802
S803
S804
S805
S806
MJSW
S801 – S803 : PSH1008
S804 – S806 : PSH1005
IC10 (2/2) DISC SELECT DRIVER
IC11
IC11 SYSTEM RESET
DEGT
DWX1116
CN11
CN15
COUNT
UPLMT
DWLMT
J901
Q901 : COUNTER UP DOWN
UP LIMIT
S901
SENS
SENS
Q901 : GP1A52HR
S901 : DSG1008
DOWN LIMIT TRAY SWITCH DSH1011
▶ Measurement point
Focos servo loop
Signal route
Traking servo loop
Carriage servo loop
Disc select motor route
Loading motor route
Spindle motor route
6
7
8
9
A
B
C
D
E
F

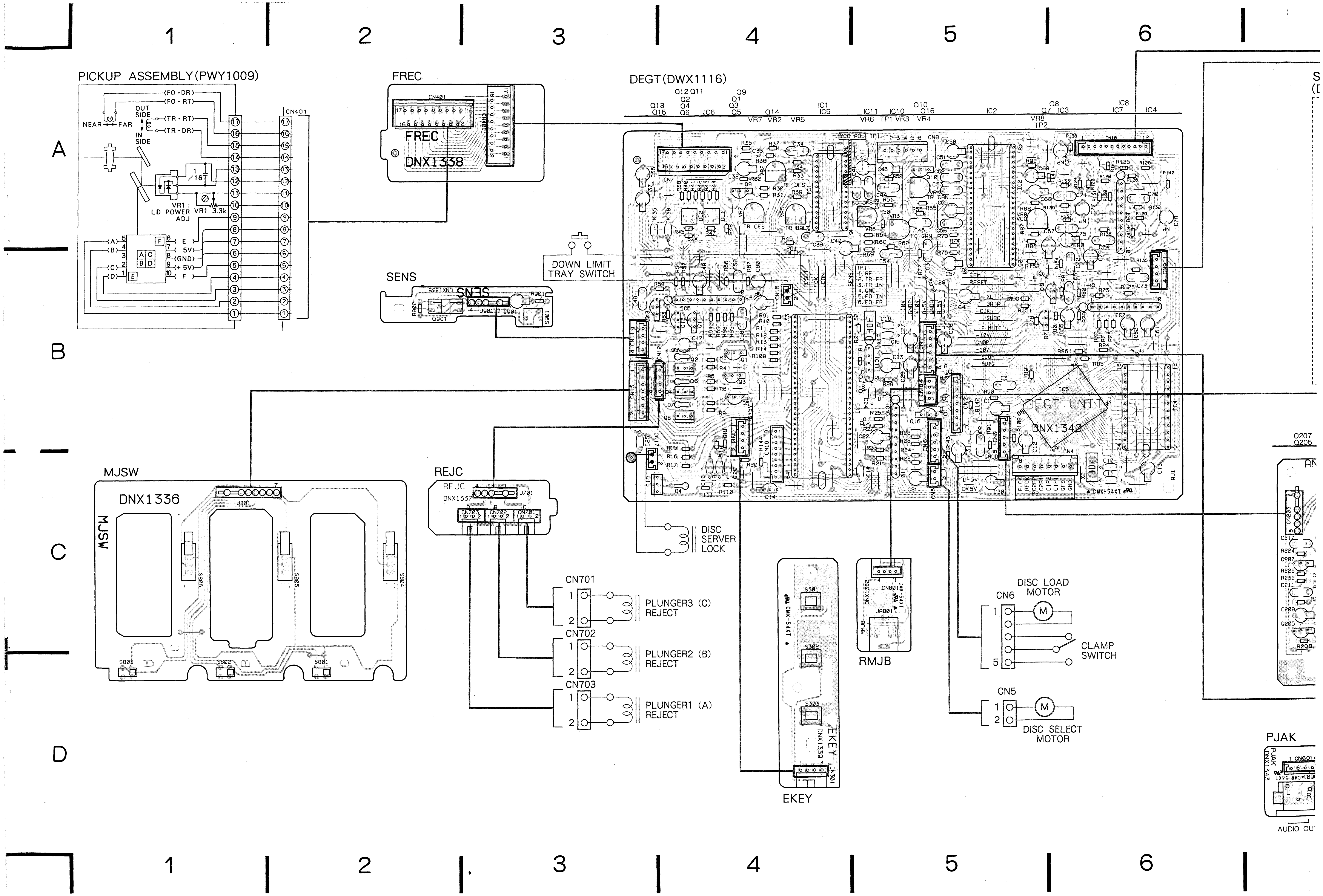
4.1.7 CNNB, KEYB, BRAN, DISP, MESS, POSS, CNTB AND ROTA

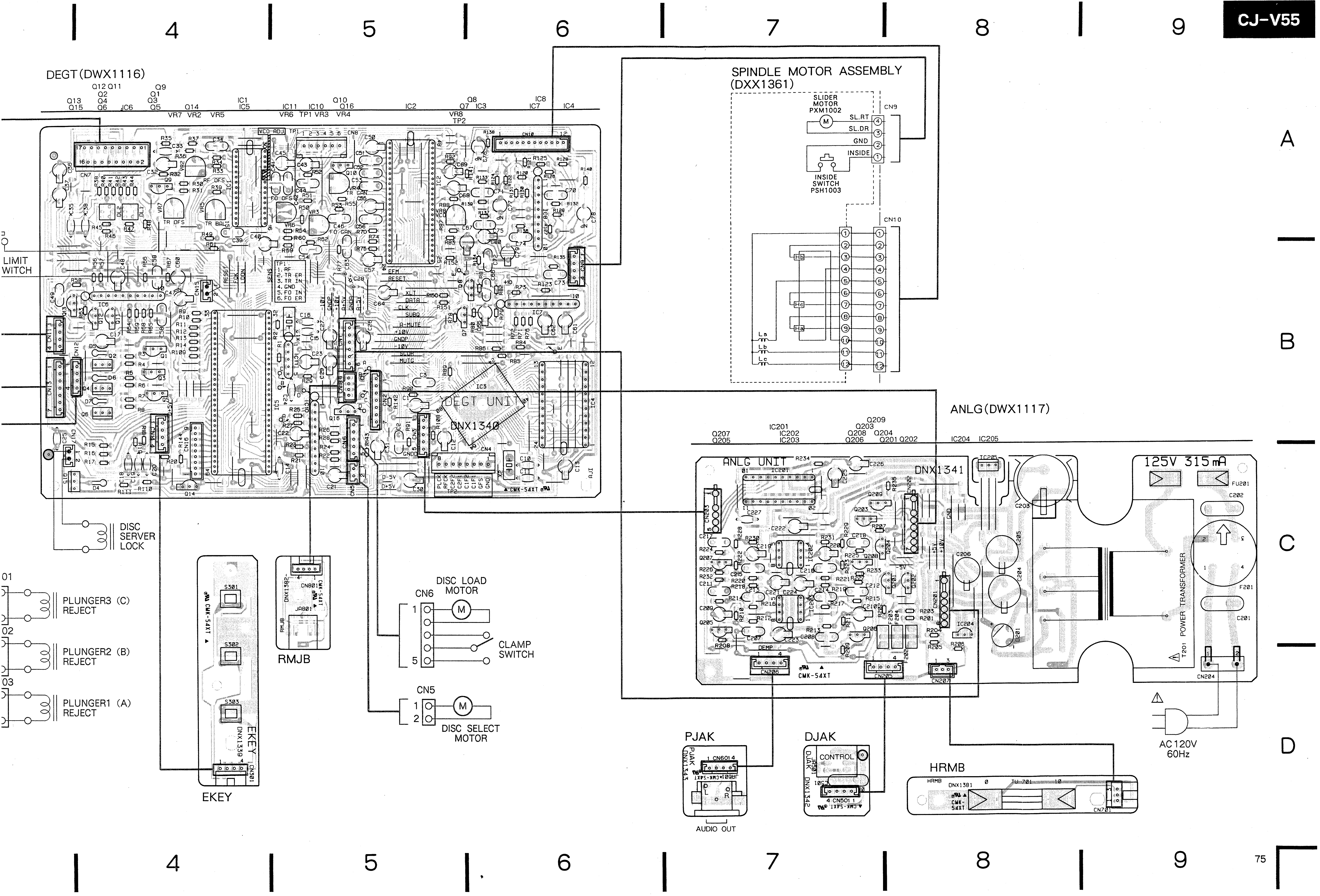

CNTB
DNX1329-A
POSS
DNX1132-A
CONT CN100
CONT CN112
CONT CN110
CONT CN102
CONT CN104
CONT CN108
CONT CN114
CONT CN116
CNNB
DNX1366-A
COIN BOX
POWB CN34
POWB CN120
DOOR SWITCH
MENU MOTOR
C701
C702
C703
C704
ROTA
DNX1321-A
POWB CN38
DISP(DWG1129)
DISP
DNX1328-A
BRAN
DNX1330-A
FROM CONT
TO MESS
TO DISP
TO KEYB
KEYB(DWS1101)
KEYB
DNX1329-A
MESS(DWG1128)
MESS
DNX1327-A

D This P. C. B. connection diagram is viewed from the foil side.

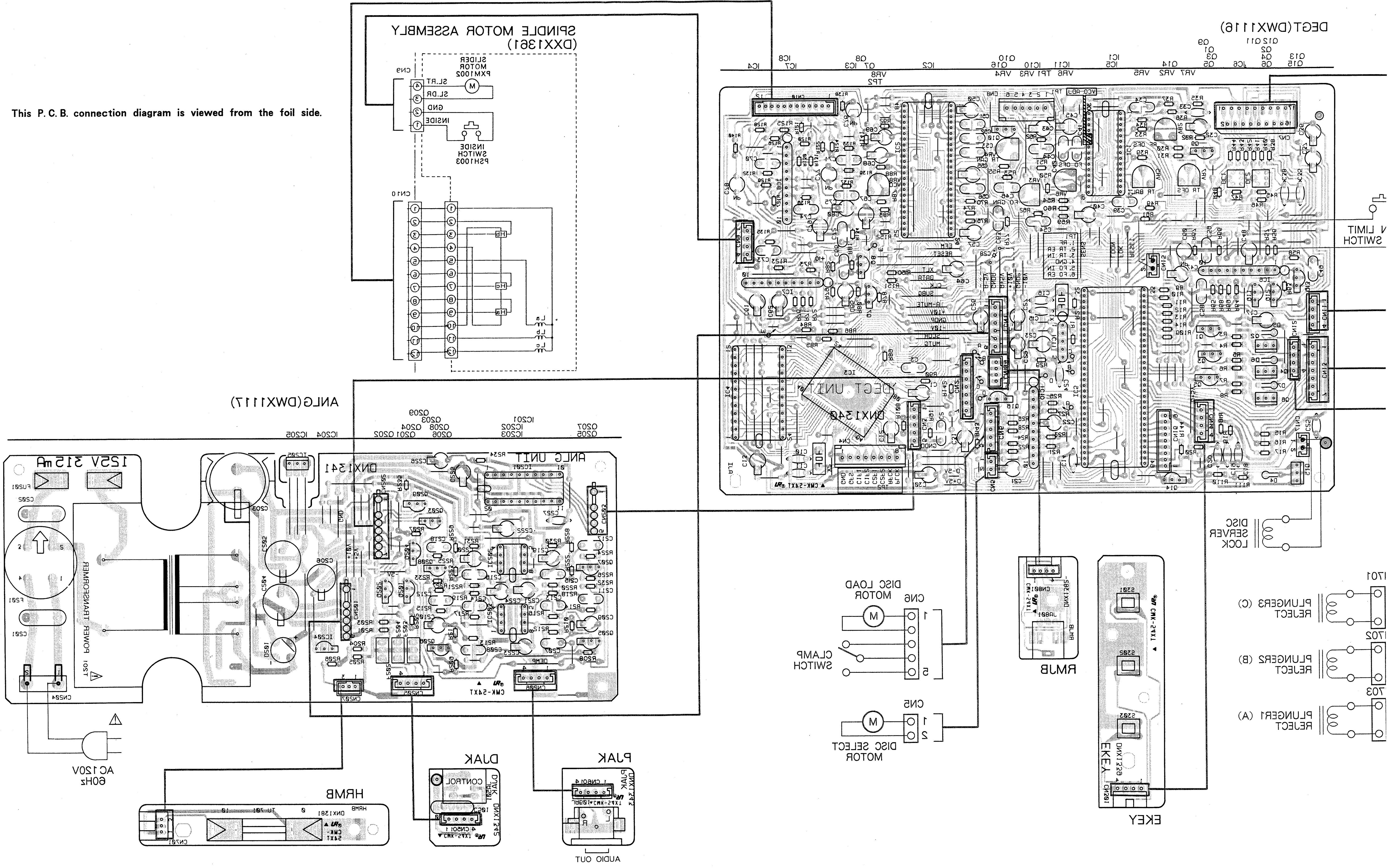
4.1.7 CNNB, KEYB, BRAN, DISP, MESS, POSS, CNTB AND ROTA

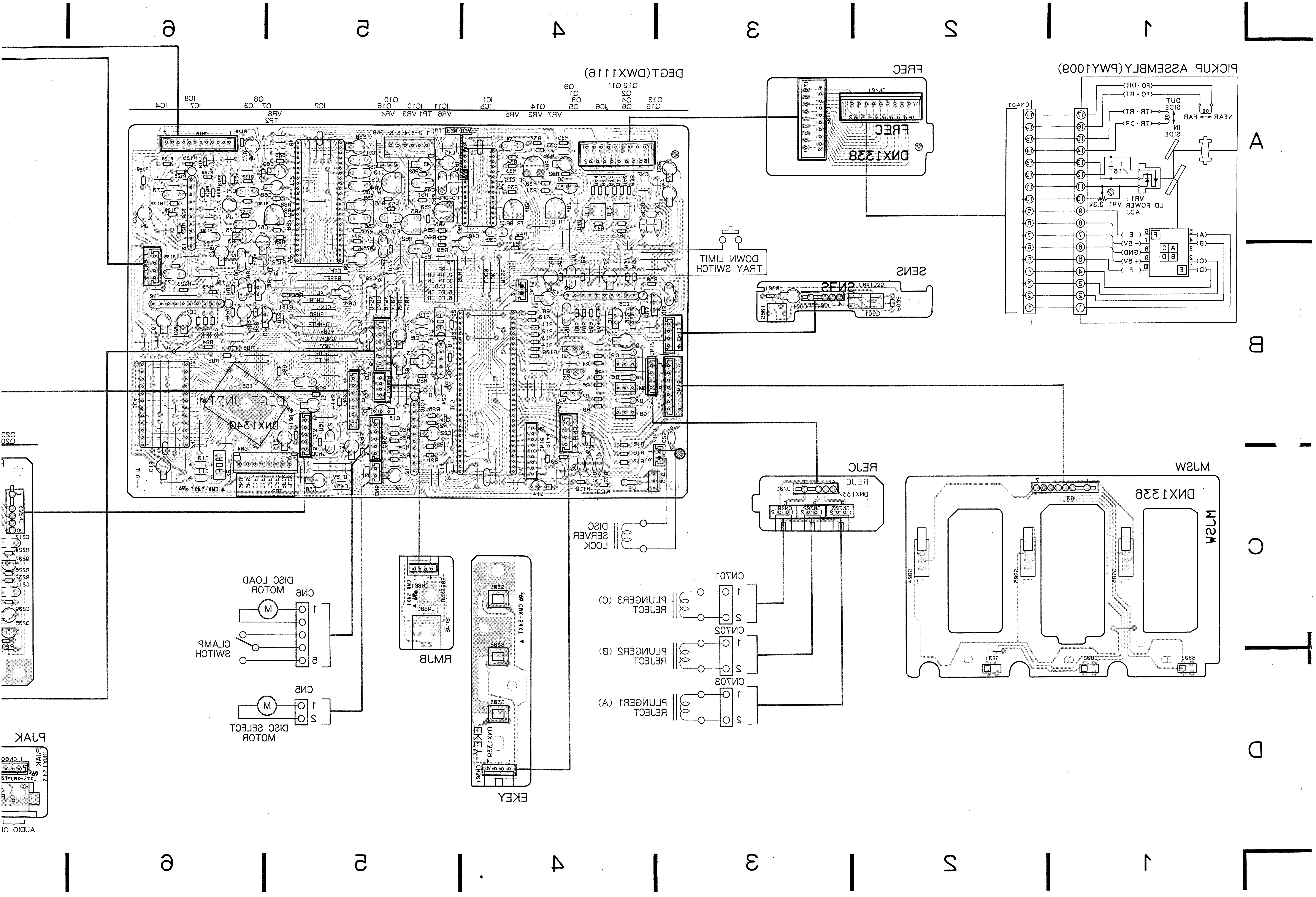

CONT CN114
CONT CN108
CONT CN104
CONT CN102
CONT CN110
CONT CN112
CONT CN100
CONT CN116
DOOR SW.
PREB.
DISPLAY
KEYBOARD
COIN BOX
MESSAGE UNIT
MENU ROTATE
DNX1366-
CNNB
DOOR SWITCH
POWB CN120
POWB CN34
COIN BOX
POSS
DNX1132-A
CNTB
DNX1379-A
MENU MOTOR
C704
C703
C702
C701
KEYB(DWS1101)
KEYB
DNX1329-A
BRAN
DNX1330-A
FROM CONT
TO DISP
TO MESS
TO KEYB
DISP(DWG1129)
DISP
DNX1328-A
MESS(DWG1128)
MESS
DNX1327-A
ROTA
DNX1331-A
TO POSS
TO CNTB
MOTOR
POWB CN38


1
2
3
4
5
6
A
B
C
D
PICKUP ASSEMBLY (PWY1009)
FO・DR
FO・RT
TR・RT
TR・DR
OUT SIDE
IN SIDE
NEAR
FAR
1/16
VR1 : LD POWER ADJ
VR1 3.3k
E
-5V
GND
+5V
F
CN401
FREC
CN401
CN402
FREC
DNX1338
DEGT (DWX1116)
DOWN LIMIT TRAY SWITCH
SENS
DNX1335
SENS
J901
Q901
R901
R902
C901
S901
DEGT UNIT
DNX1340
MJSW
DNX1336
MJSW
J801
S801
S802
S803
S804
S805
S806
REJC
REJC
DNX1337
J701
CN701
CN702
CN703
CN701
PLUNGER3 (C) REJECT
CN702
PLUNGER2 (B) REJECT
CN703
PLUNGER1 (A) REJECT
DISC SERVER LOCK
EKEY
DNX1339
EKEY
S301
S302
S303
CN301
CMK-54XT
RMJB
DNX1382
CN801
JA801
RMJB
CN6
DISC LOAD MOTOR
M
CLAMP SWITCH
CN5
M
DISC SELECT MOTOR
PJAK
PJAK
DNX1343
CN601
AUDIO OUT
Q207
Q205
CN203
C217
R224
Q207
R226
R232
C211
C209
Q205
R208


4
5
6
7
8
9
A
B
C
D
DEGT(DWX1116)
DEGT UNIT
DNX1340
SPINDLE MOTOR ASSEMBLY
(DXX1361)
SLIDER MOTOR PXM1002
SL.RT
SL.DR
GND
INSIDE
INSIDE SWITCH PSH1003
CN9
CN10
LIMIT SWITCH
DISC SERVER LOCK
PLUNGER3 (C) REJECT
PLUNGER2 (B) REJECT
PLUNGER1 (A) REJECT
EKEY
DNX1339
RMJB
DNX1382
DISC LOAD MOTOR
CN6
CLAMP SWITCH
CN5
DISC SELECT MOTOR
ANLG(DWX1117)
ANLG UNIT
DNX1341
125V 315mA
POWER TRANSFORMER
AC120V 60Hz
PJAK
DNX1343
AUDIO OUT
DJAK
DNX1342
CONTROL
HRMB
DNX1381
CMK-54XT

This P.C.B. connection diagram is viewed from the foil side.

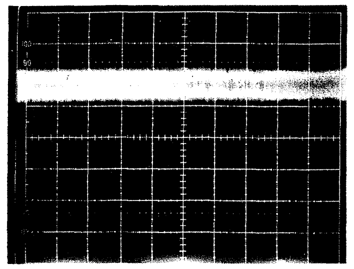

SPINDLE MOTOR ASSEMBLY
(DXX1361)
SLIDER MOTOR PXM1002
INSIDE SWITCH PSH1003
CN9
CN10
DEGT(DWX1116)
DEGT UNIT
DNX1340
V LIMIT SWITCH
ANLG(DWX1117)
ANLG UNIT
DNX1341
125V 315mA
POWER TRANSFORMER
AC120V
60Hz
DISC SERVER LOCK
DISC LOAD MOTOR
CN6
CLAMP SWITCH
CN5
DISC SELECT MOTOR
RMJB
EKEY
PLUNGER3 (C) REJECT
PLUNGER2 (B) REJECT
PLUNGER1 (A) REJECT
HRMB
DJAK
CONTROL
PJAK
AUDIO OUT
A
B
C
D
9
8
7
6
5
4


1
2
3
4
5
6
A
B
C
D
PICKUP ASSEMBLY(PWY1009)
CN401
NEAR
FAR
OUT SIDE
IN SIDE
VR1 : LD POWER ADJ
VR1 3.3k
FREC
DNX1338
DEGT(DWX1116)
DEGT UNIT
DNX1340
SENS
DOWN LIMIT TRAY SWITCH
REJC
DNX1337
MJSW
DNX1336
DISC SERVER LOCK
CN701
PLUNGER3 (C) REJECT
CN702
PLUNGER2 (B) REJECT
CN703
PLUNGER1 (A) REJECT
EKEY
RMJB
DISC LOAD MOTOR
CN6
CLAMP SWITCH
CN5
DISC SELECT MOTOR
PJAK
AUDIO OUT

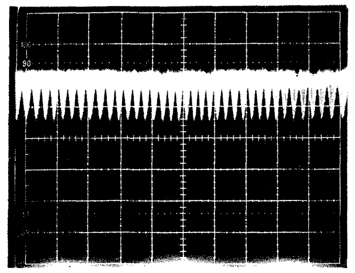
Wave Forms

NOTE : The encircled numbers denote measuring points in the schematic diagram.

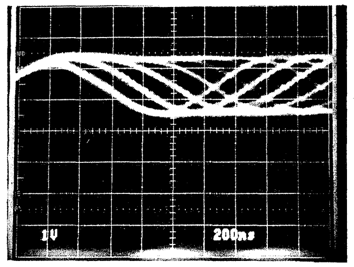
① CN7-5 Pin : PLAY MODE
50mV/div 5msec/div



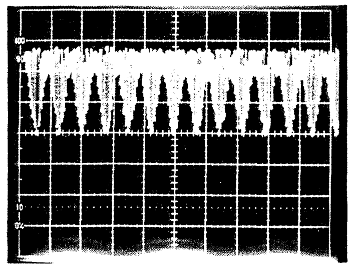
① CN7-5 Pin : SEARCH MODE
50mV/div 5msec/div



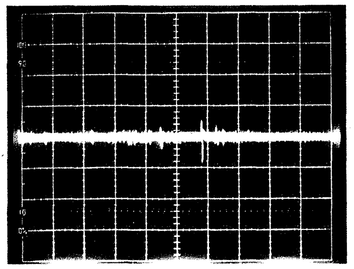
② TP1-1 Pin : PLAY MODE
1V/div 200nsec/div



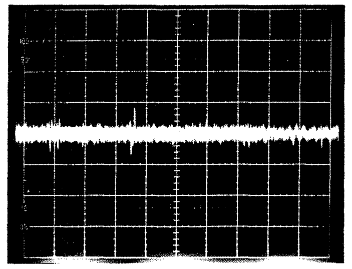
② TP1-1 Pin : SEARCH MODE
500mV/div 100µsec/div



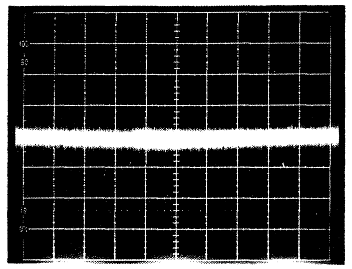
③ TP1-6 Pin : PLAY MODE
500mV/div 10msec/div



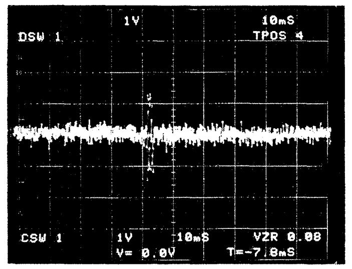
③ TP1-6 Pin : SEARCH MODE
500mV/div 10msec/div



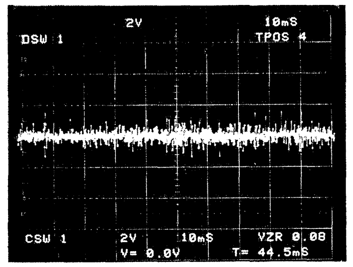
④ TP1-2 Pin : PLAY MODE
1V/div 10msec/div



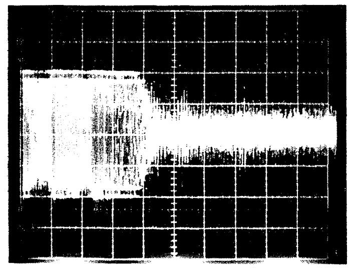
④ TP1-2 Pin : SEARCH MODE
1V/div 10msec/div



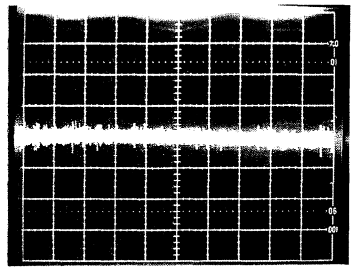
⑤ IC6-2 Pin : PLAY MODE
2V/div 10msec/div



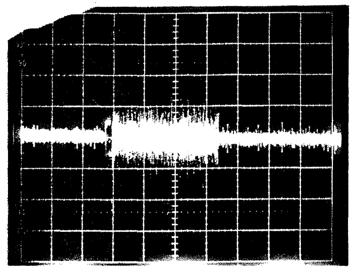
⑤ IC6-2 Pin : SEARCH MODE
2V/div 10msec/div



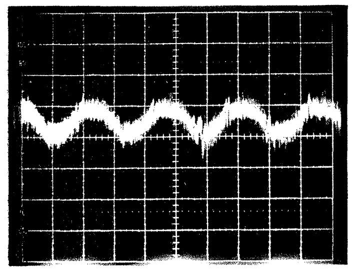
⑥ IC6-8 Pin : PLAY MODE
2V/div 10msec/div



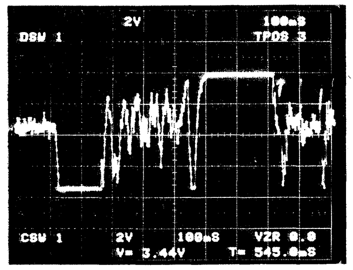
⑥ IC6-8 Pin : SEARCH MODE
2V/div 10msec/div



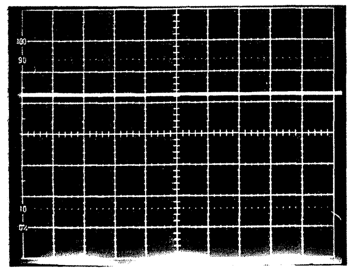
⑦ IC2-45 Pin : PLAY MODE
2V/div 10msec/div



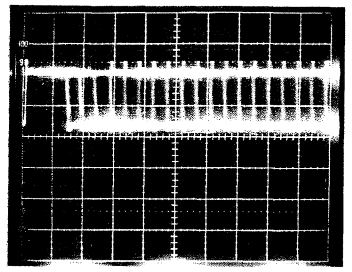
⑦ IC2-45 Pin : SEARCH MODE
2V/div 10msec/div



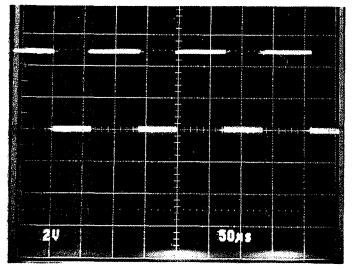
⑧ IC2-33, 34 Pin : PLAY MODE
2V/div 10msec/div



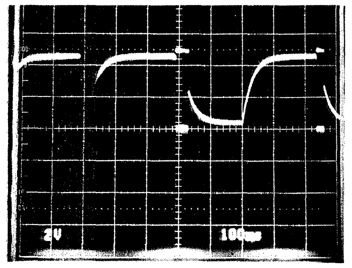
⑨ IC1-27 Pin : PLAY MODE
2V/div 500nsec/div



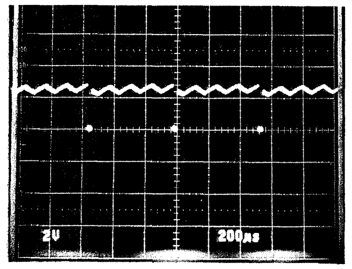
⑩ IC3-4 Pin : PLAY MODE
2V/div 50µsec/div



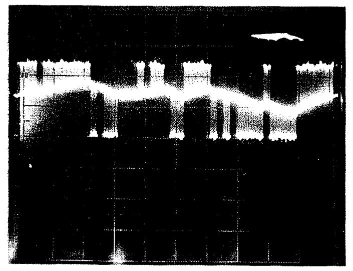
⑩ IC3-4 Pin : SEARCH MODE
2V/div 100msec/div



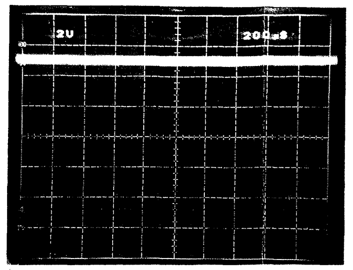
⑪ IC3-3 Pin : PLAY MODE
2V/div 200µsec/div



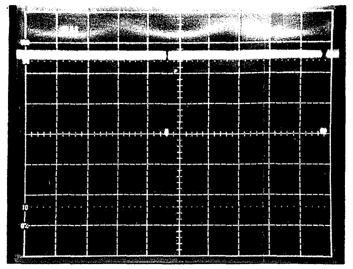
⑪ IC3-3 Pin : SEARCH MODE
2V/div 10msec/div



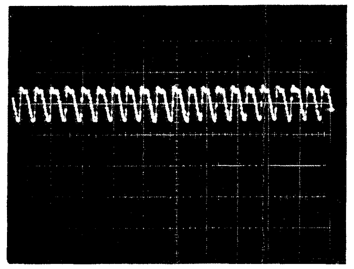
⑫ TP2-2 Pin : PLAY MODE
2V/div 200µsec/div



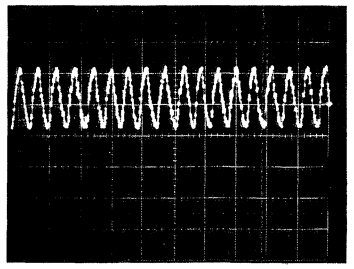
⑫ TP2-2 Pin : SEARCH MODE
2V/div 200µsec/div



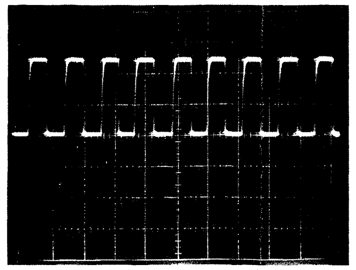
⑬ IC2-38 Pin : PLAY MODE
2V/div 200nsec/div



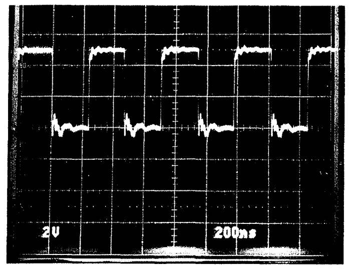
⑭ IC3-8 Pin : PLAY MODE
2V/div 200nsec/div



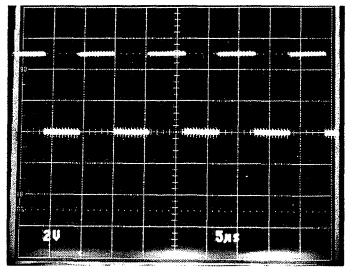
⑮ TP2-8 Pin : PLAY MODE
2V/div 200nsec/div



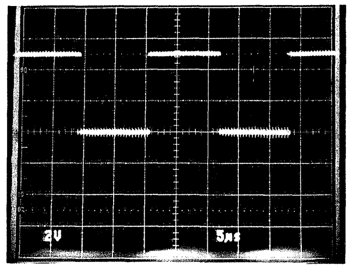
⑯ IC3-76 Pin : STOP MODE
2V/div 200nsec/div



⑰ IC3-79 Pin : STOP MODE
2V/div 5µsec/div

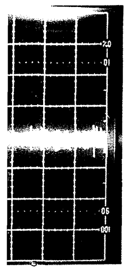


⑱ IC3-80 Pin : STOP MODE
2V/div 5µsec/div

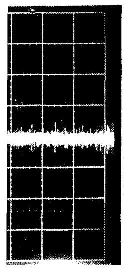


uring points in the

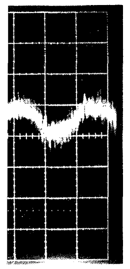
IODE
div



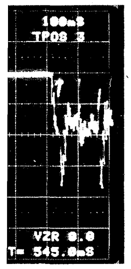
MODE
div



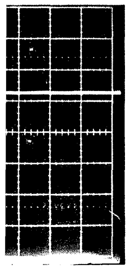
MODE
div



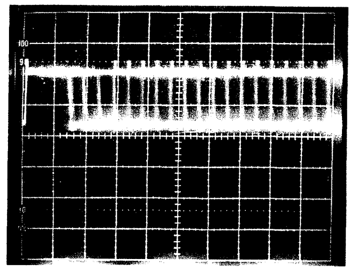
H MODE
div



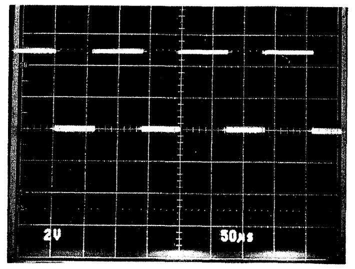
MODE
iv



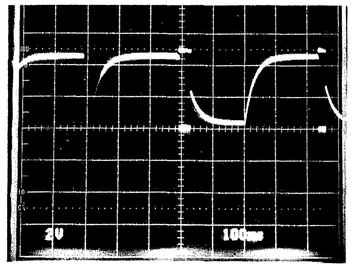
⑨ IC1-27 Pin : PLAY MODE
2V/div 500nsec/div



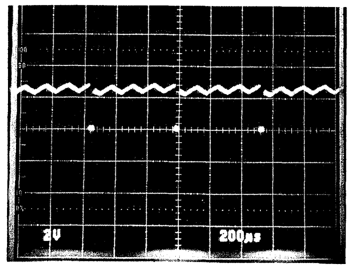
⑩ IC3-4 Pin : PLAY MODE
2V/div 50μsec/div



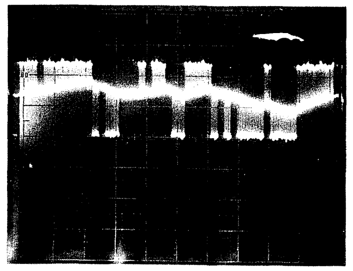
⑩ IC3-4 Pin : SEARCH MODE
2V/div 100msec/div



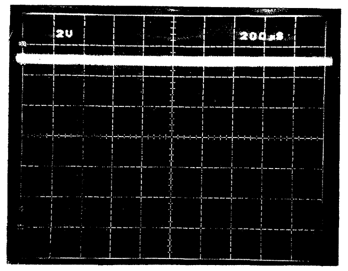
⑪ IC3-3 Pin : PLAY MODE
2V/div 200μsec/div



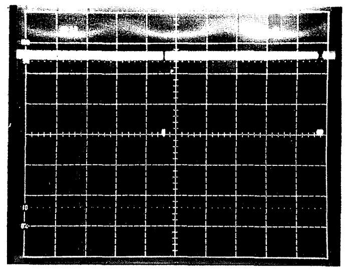
⑪ IC3-3 Pin : SEARCH MODE
2V/div 10msec/div



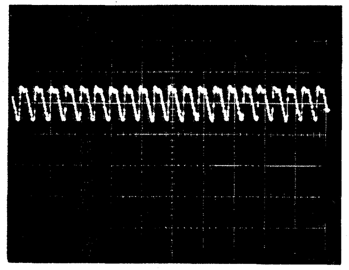
⑫ TP2-2 Pin : PLAY MODE
2V/div 200μsec/div



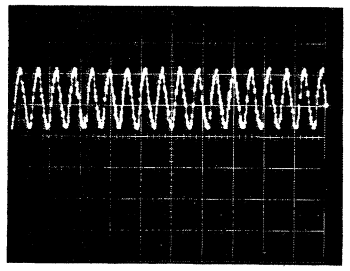
⑫ TP2-2 Pin : SEARCH MODE
2V/div 200μsec/div



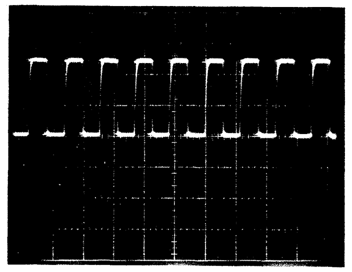
⑬ IC2-38 Pin : PLAY MODE
2V/div 200nsec/div



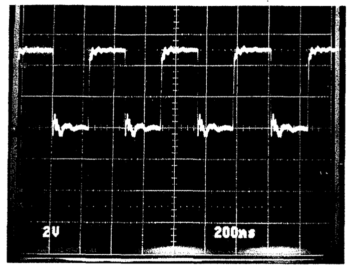
⑭ IC3-8 Pin : PLAY MODE
2V/div 200nsec/div



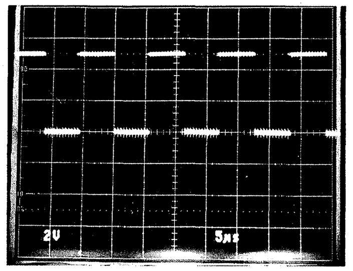
⑮ TP2-8 Pin : PLAY MODE
2V/div 200nsec/div



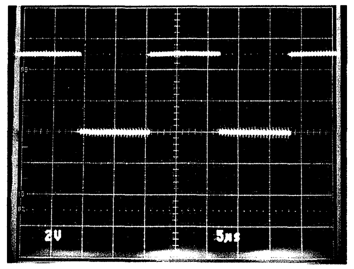
⑯ IC3-76 Pin : STOP MODE
2V/div 200nsec/div



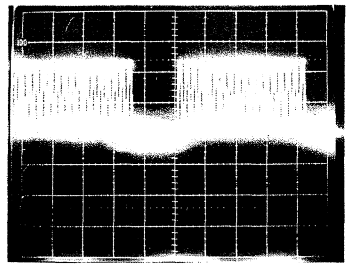
⑰ IC3-79 Pin : STOP MODE
2V/div 5μsec/div



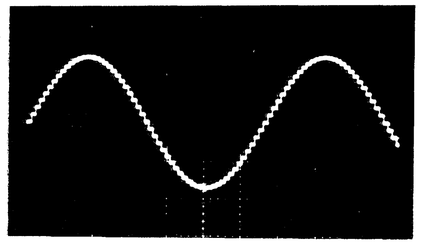
⑱ IC3-80 Pin : STOP MODE
2V/div 5μsec/div



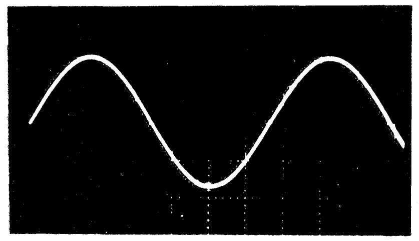
⑲ IC201-9 Pin : PLAY MODE
2V/div 0.5μsec/div



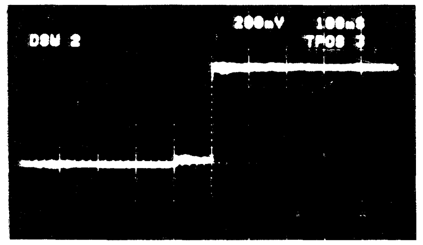
⑳ IC202-1 Pin : PLAY MODE
2V/div 50μsec/div



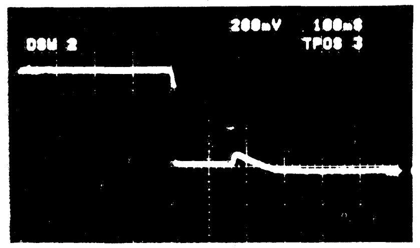
㉑ OUTPUT Lch : PLAY MODE
2V/div 50μsec/div



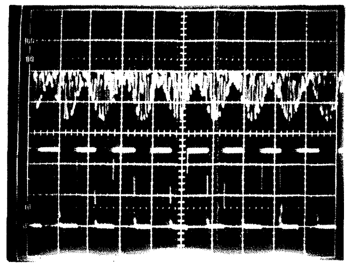
㉒ IC11-5 Pin : POWER ON
2V/div 100msec/div



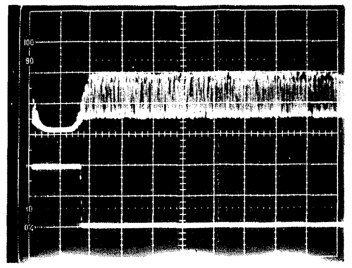
㉒ IC11-5 Pin : POWER OFF
2V/div 100msec/div



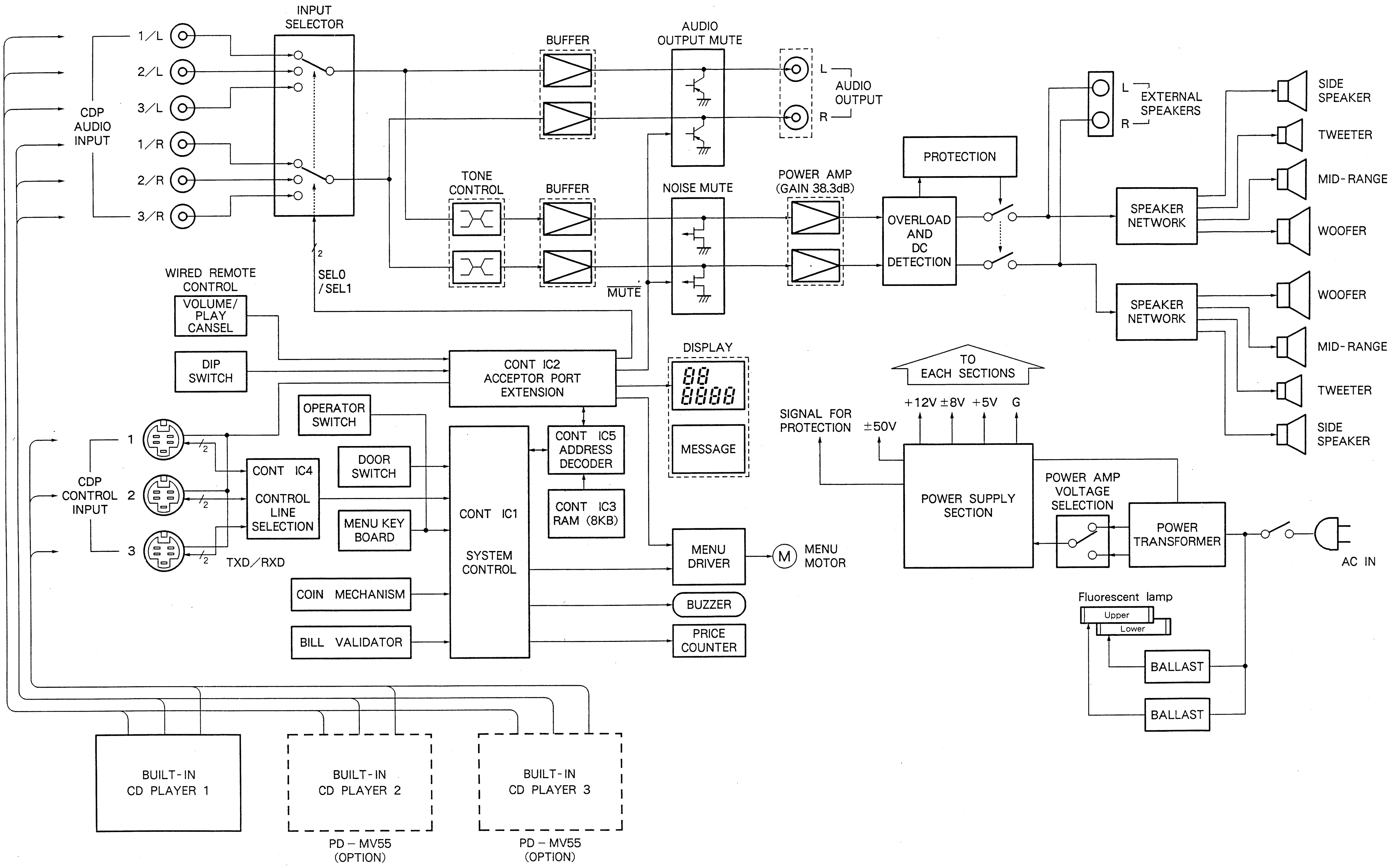
㉓ IC1-22 Pin : TRACKING OPEN
0.1msec/div
Upper TP1-1 Pin : 1V/div
Lower IC1-22 Pin : 2V/div



㉔ IC1-21 Pin : DFCT 0.5msec/div
Upper TP1-1 Pin : 1V/div
Lower IC1-21 Pin : 5V/div



5. BLOCK DIAGRAM


INPUT SELECTOR
1/L
2/L
3/L
1/R
2/R
3/R
CDP AUDIO INPUT
SEL0 /SEL1
BUFFER
TONE CONTROL
BUFFER
AUDIO OUTPUT MUTE
NOISE MUTE
MUTE
L
R
AUDIO OUTPUT
POWER AMP (GAIN 38.3dB)
PROTECTION
OVERLOAD AND DC DETECTION
L
R
EXTERNAL SPEAKERS
SPEAKER NETWORK
SPEAKER NETWORK
SIDE SPEAKER
TWEETER
MID-RANGE
WOOFER
WOOFER
MID-RANGE
TWEETER
SIDE SPEAKER
WIRED REMOTE CONTROL
VOLUME/ PLAY CANSEL
DIP SWITCH
CONT IC2 ACCEPTOR PORT EXTENSION
DISPLAY
88
8888
MESSAGE
OPERATOR SWITCH
DOOR SWITCH
MENU KEY BOARD
CONT IC4 CONTROL LINE SELECTION
CONT IC1 SYSTEM CONTROL
CONT IC5 ADDRESS DECODER
CONT IC3 RAM (8KB)
CDP CONTROL INPUT
1
2
3
TXD/RXD
COIN MECHANISM
BILL VALIDATOR
MENU DRIVER
M
MENU MOTOR
BUZZER
PRICE COUNTER
TO EACH SECTIONS
+12V ±8V +5V G
SIGNAL FOR PROTECTION
±50V
POWER SUPPLY SECTION
POWER AMP VOLTAGE SELECTION
POWER TRANSFORMER
AC IN
Fluorescent lamp
Upper
Lower
BALLAST
BALLAST
BUILT-IN CD PLAYER 1
BUILT-IN CD PLAYER 2
BUILT-IN CD PLAYER 3
PD – MV55 (OPTION)
PD – MV55 (OPTION)

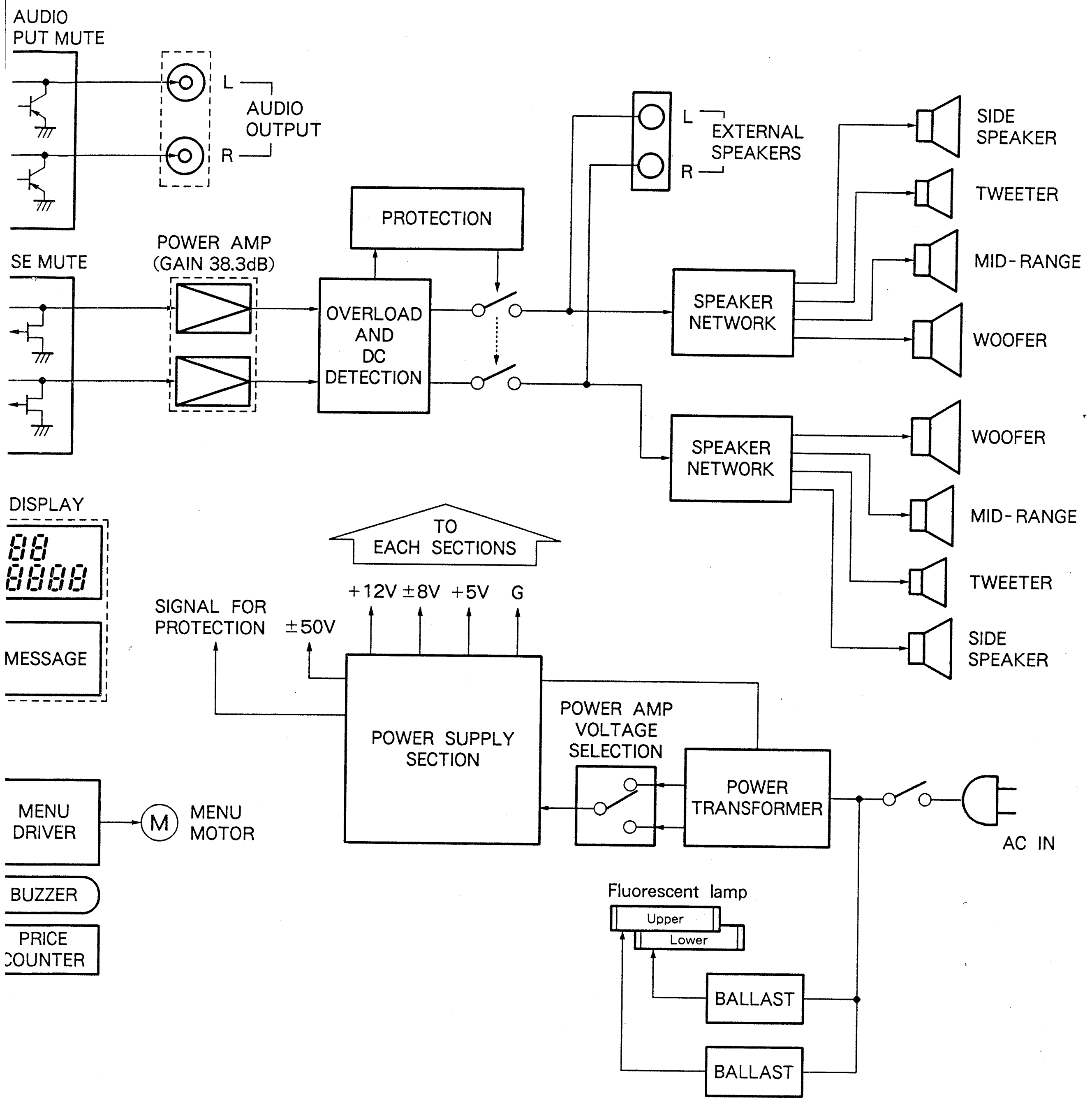
6. ELEC

6.1 MAIN

NOTES :
- Parts without
- Parts marked b
- The ⚠ mark fo
  replacing, be s
- When ordering
  Ex.1 When the
  J = 5 %,
  560 Ω → 5
  47k Ω → 4
  0.5 Ω → 0
  1 Ω → 0
  Ex.2 When the
  5.62k Ω →

Miscellaneo

Mark	Symbol
◉	MESS
◉	DISP
◉	KEYB
	BRAN
	ROTA
	POSS
	LAMP
	CNTB
◉	PAMP
	SPTB
	LOJB
◉	PREB
◉	POWB
	ACIN
	ASEL
	PSWB
◉	CONT
	OPER
	CRJB
	RMJB
	CDJB
	DIPS
	CNNB
	Network
	C702,C70
	C701,C70
⚠	FU1
⚠	FU2 – F
⚠	FU5
⚠	FU601
	Micr
⚠	Powe
⚠	AC
	Elect


AUDIO
PUT MUTE
L
R
AUDIO
OUTPUT
SE MUTE
POWER AMP
(GAIN 38.3dB)
PROTECTION
OVERLOAD
AND
DC
DETECTION
L
R
EXTERNAL
SPEAKERS
SPEAKER
NETWORK
SPEAKER
NETWORK
SIDE
SPEAKER
TWEETER
MID-RANGE
WOOFER
WOOFER
MID-RANGE
TWEETER
SIDE
SPEAKER
DISPLAY
88
8888
MESSAGE
TO
EACH SECTIONS
SIGNAL FOR
PROTECTION
±50V
+12V ±8V +5V G
POWER SUPPLY
SECTION
POWER AMP
VOLTAGE
SELECTION
POWER
TRANSFORMER
AC IN
MENU
DRIVER
M
MENU
MOTOR
BUZZER
PRICE
COUNTER
Fluorescent lamp
Upper
Lower
BALLAST
BALLAST

6. ELECTRICAL PARTS LIST

6.1 MAIN SECTION

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5 %, and K = 10 %).

$560\,\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ ………………………… RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
$47\text{k}\,\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ ………………………… RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
$0.5\,\Omega \rightarrow$ 0R5 ………………………… RN2H$\boxed{0}\boxed{R}\boxed{5}$K
$1\,\Omega \rightarrow$ 010 ………………………… RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62\text{k}\,\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ ………………………… RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

Miscellaneous Parts

Mark	Symbol & Description	Part No.
◉	MESS	DWG1128
◉	DISP	DWG1129
◉	KEYB	DWS1101
	BRAN	
	ROTA	
	POSS	
	LAMP	
	CNTB	
◉	PAMP	DWH1007
	SPTB	
	LOJB	
◉	PREB	DWK1011
◉	POWB	DWR1056
	ACIN	
	ASEL	
	PSWB	
◉	CONT	DWG1138
	OPER	
	CRJB	
	RMJB	
	CDJB	
	DIPS	
	CNNB	
	Network assembly	SWN1197
	C702,C704	CEANP010M50
	C701,C703	CGDYX104M25
⚠	FU1 Fuse (1A)	DEK1011
⚠	FU2 – FU4 Fuse (1.6A)	DEK1015
⚠	FU5 Fuse (6A)	DEK1022
⚠	FU601 Fuse (2A)	DEK1016
	Micro switch (DOOR)	DSF1001
⚠	Power transformer	DTT1039
⚠	AC Power cord	DDG1025
	Electromagnetic counter	DAW1011

Mark	Symbol & Description	Part No.
⚠	AC outlet	DKN-108
⚠	Ballast	DTH1114
	Channel	DXB1107
⚠	Lithium cell	DEM1001
⚠	Strain relief	VEC-201
	Motor (Menu)	DXM1033
	Motor assembly (Menu)	DXX1368
	Remote control unit	DXR1007
⚠	Connection cord	DDE1034
⚠	Fluorescent lamp socket (Upper)	DKK1006
⚠	Fluorescent lamp socket (Under L)	DKK1007
⚠	Glow lamp socket	DKK1009
	Cord with pin plug	PDE1065

◉MESS (DWG1128)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	D101,D102	LN0401RP2
	D103 – D105	LN0603RP2

RESISTORS

Mark	Symbol & Description	Part No.
	R101 – R110	RD1/6PM□□□J

◉DISP (DWG1129)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	D202,D203	LN526RA (V)
	D201	LN526YA

◉ KEYB (DWS1101)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	D311 – D314	SLV-31DC3
	D301 – D310	SLV-31MC3
	D315 – D322	SLV-31YC3

SWITCHES

Mark	Symbol & Description	Part No.
	S301 – S310 Tact switch (1 – 10)	DSG1011
	S311 – S316 Tact switch (CLEAR, BEST HITS, ROTATE MENU)	RSG-155

RESISTORS

Mark	Symbol & Description	Part No.
	R301 – R306	RD1/6PM□□□J

ROTA

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	Q401	UN4112
	Q403	UN4212
	Q404	2SB1185
	Q402	2SD1762
	D401,D402	1SR139-400

CAPACITORS

Mark	Symbol & Description	Part No.
	C401	CEAL470M6R3
	C403	CEAS101M25
	C402	CKPUYF223Z25

RESISTORS

Mark	Symbol & Description	Part No.
	R401-R405	RD1/6PM□□□J

POSS

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
	D501	GP1A14

CAPACITOR

Mark	Symbol & Description	Part No.
	C501	CKPUYF223Z25

RESISTOR

Mark	Symbol & Description	Part No.
	R501	RD1/6PM391J

BRAN

There is not supplied in this unit.

LAMP

CAPACITORS

Mark	Symbol & Description	Part No.
⚠	C601,C602 (0.01μF)	RCG-009

OTHERS

Mark	Symbol & Description	Part No.
⚠	CN33 Connector	SD-5277-02A

CNTB

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
	IC801	GP1A30R

CAPACITOR

Mark	Symbol & Description	Part No.
	C801	CKPUYF223Z25

RESISTOR

Mark	Symbol & Description	Part No.
	R801	RD1/6PM121J

LOJB

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	Q50,Q51	2SA1309A

CAPACITORS

Mark	Symbol & Description	Part No.
	C102	CKCYF103Z50
	C100,C101	CKPUYX222M16

RESISTORS

Mark	Symbol & Description	Part No.
	R50 – R53	RD1/6PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	JA53 2P pin jack	DKB1011

SPTB

OTHERS

Mark	Symbol & Description	Part No.
⚠	Speaker terminal	AKE1013

◉PAMP (DWH1007)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC1	STK4231
	Q6	2SA1283
	Q4	2SA933S
	Q7,Q8	2SA970
	Q1,Q2,Q5	2SC1740S
	Q3	2SC1775
	Q12,Q13	2SJ103
	D7	MTZJ6.8B
	D5,D8,D9,D11	1SR35-100AVL
	D3	1SS142
	D2	1SS254

RELAY

Mark	Symbol & Description	Part No.
	RY1 Relay	RSR1014

COILS

Mark	Symbol & Description	Part No.
	L1,L2 AF choke coil	DTH1116

CAPACITORS

Mark	Symbol & Description	Part No.
	C13,C14 (33/100)	DCH1018
	C7 (100/100)	DCH1019
	C6 (10/100)	DCH1022
	C2,C11	CEASR22M50
	C18	CEAS010M50
	C3,C9	CEAS101M10
	C10,C17	CEAS101M50
	C16	CEAS221M16
	C21	CEAS4R7M50
	C4,C8	CEAS470M50
	C19	CEAS471M10
	C1,C12	CKCYB222K50
	C22 – C25	CFTXA104J50

RESISTORS

Mark	Symbol & Description	Part No.
	R38,R39 Wire wound resistor (0.47 × 2) (5W)	DCN1020
	R7 – R9,R11,R12,R14,R33, R41 – R44	RD1/2LF□□□J
	R3,R16	RD1/2PMF681J
	Other resistors	RD1/6PM□□□J

◉PREB (DWK1011)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC2,IC3	NJM4558S
	IC1	TC4052BP
	Q1,Q2	2SC3311A

CAPACITORS

Mark	Symbol & Description	Part No.
	C11,C12	CEASR47M50
	C33,C34	CEAS010M50
	C13 – C15,C20,C22,C24 – C26, C29,C30	CEAS4R7M50
	C6,C7,C21,C23	CEAS470M16
	C3,C4	CFTXA104J50
	C17,C32	CFTXA473J50
	C5,C8 – C10,C35	CGCYX473M25
	C1,C2	CKCYF103Z50
	C18,C27	CQMA122J50
	C16,C31	CQMA123J50
	C19,C28	CQMA682J50

RESISTORS

Mark	Symbol & Description	Part No.
	VR1 Volume (20k)	DCS1013
	VR2,VR3 Volume (100k)	DCS1014
	Other resistors	RD1/6PM□□□J

ACIN

COIL

Mark	Symbol & Description	Part No.
⚠	L301 Line filter	VTL-004

CAPACITORS

Mark	Symbol & Description	Part No.
⚠	C301,C302 (0.01μF)	RCG-009

OTHERS

Mark	Symbol & Description	Part No.
⚠	CN36,CN74 Connector	SD-5277-02A

ASEL

SWITCH

Mark	Symbol & Description	Part No.
⚠	Line voltage selector (SPEAKER SELECTOR)	DSX1010

◉ POWB (DWR1056)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC104	NJM78M08FA
	IC101	NJM78M05FA
	IC103	NJM78M12FA
	IC105	NJM79M08FA
	IC102	TA7291S
	Q101	DTC124ES
	Q102	2SA1283
	D106	MTZ4.3C
⚠	D109	S10VB10-DF9
⚠	D101,D108	S2VB10F
⚠	D102 – D105,D107	1SR139-400

RELAY

Mark	Symbol & Description	Part No.
⚠	RY101 Relay	DSR1006

CAPACITORS

Mark	Symbol & Description	Part No.
	C114,C115 (10000/80)	ACH-264
⚠	C112,C113 (0.01μF)	RCG-009
	C102 (6800/25)	RCH1032
	C105,C109,C118,C119	CEAS010M50
	C110,C111	CEAS102M35
	C106	CEAS221M25
	C103	CEAS4R7M50
	C104,C116,C117	CEAS470M25
	C101,C107,C108	CKCYF103Z50

RESISTORS

Mark	Symbol & Description	Part No.
⚠	R116	DCN1002
	R114,R115	RS1LMF103J
⚠	R112,R113	RS1LMF151J
⚠	R103	RD1/2LF4R7J
	Other resistors	RD1/6PM□□□J

PSWB

SWITCH

Mark	Symbol & Description	Part No.
⚠	Power switch (POWER)	DSA1005

CAPACITOR

Mark	Symbol & Description	Part No.
⚠	C201 (0.01μF)	RCG-009

◉ CONT (DWG1138)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC2	CXD1095Q
	IC7	M51953BL
	IC1	PD0073
	IC10	SN74LS05N
	IC3	TC5564APL-15
	IC6	TC74HC04AP
	IC5	TC74HC139AP
	IC4	TC74HC4052AP
	Q37,Q42,Q43	DTA124ES
	Q7-Q20,Q29 – Q31,Q38,Q39,Q44	DTC124ES
	Q34	2SA1015
	Q1 – Q6	2SA1283
	Q21 – Q26,Q33,Q45,Q46	2SC1740S
	Q27,Q40	2SC3246
	D11,D12	MTZ5.6B
	D6	1SR139-400
	D1 – D5,D7 – D10	1SS254

COILS AND FILTERS

Mark	Symbol & Description	Part No.
	L1,L2	LAU010K
	F1 – F20 3 Terminal filter	VTH1001

CAPACITORS

Mark	Symbol & Description	Part No.
	C58 Capacitor array (2200p × 8)	DCG1004
	C11,C12	CCCCH150J50
	C42,C43	CCCCH470J50
	C44	CEAS010M50
	C4,C7,C30 – C33,C35,C38	CEAS330M16
	C24	CEAS332M6R3
	C10	CEAS470M50
	C61	CEAS471M10
	C39	CKCYF102Z50
	C1 – C3,C5,C6,C9,C13 – C23, C29,C34,C37,C46 – C56	CKCYF103Z50
	C8,C28,C57	CKCYF473Z50
	C62,C63	CKCYF103Z50

RESISTORS

Mark	Symbol & Description	Part No.
	VR1 Semi-fixed (4.7k)	VRTB6VS472
	R60,R67,R104 Resistor array	RA8S□□□J
	Other resistors	RD1/6PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	X1 Crystal resonator	DSS1001
	Piezoelectric buzzer	DPX1002
	IC socket	VKH-029

OPER

SWITCHES

Mark	Symbol & Description	Part No.
	S301 – S303 Tact switch (MEMORY CLEAR, MENU ROTATION, SERVICE MODE)	DSG-107

CRJB

CAPACITORS

Mark	Symbol & Description	Part No.
	C501 Capacitor array (1000p × 8)	DCG-105
	C502	CKCYF102Z50

OTHERS

Mark	Symbol & Description	Part No.
	4P mini DIN socket	VKN1072

RMJB

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	D401 – D404	MTZJ5.6B

CAPACITOR

Mark	Symbol & Description	Part No.
	C401	CKCYF103Z50

RESISTORS

Mark	Symbol & Description	Part No.
	R401 – R404	RD1/6PM221J

OTHERS

Mark	Symbol & Description	Part No.
	4P mini DIN socket	VKN1072

CDJB

OTHERS

Mark	Symbol & Description	Part No.
	JA Pin jack (AUDIO IN)	PKB-009

DIPS

SWITCH

Mark	Symbol & Description	Part No.
	S1 8P DIP switch (FUNCTION)	DSX1011

CNNB

COILS

Mark	Symbol & Description	Part No.
	L301,L302	LAU010M

CAPACITORS

Mark	Symbol & Description	Part No.
	C301,C303 Capacitor array (2200p × 8)	DCG1004
	C302,C304 Capacitor array (2200p × 6)	DCG1005
	C305,C306 Capacitor array (2200p × 4)	DCG1006
	C307 – C311	CKCYF103Z50

NETWORK ASSEMBLY (SWN1197)

COILS

Mark	Symbol & Description	Part No.
	L1 (3.3mH)	STH1100
	L3 (3.9mH)	STH1021
	L4 (0.22mH)	STH-327

CAPACITORS

Mark	Symbol & Description	Part No.
	C1	CES4220KJ
	C2	CES4100KJ
	C4	CES4DX1R8KJ

RESISTOR

Mark	Symbol & Description	Part No.
	R4	RT10BAL100K

OTHERS

Mark	Symbol & Description	Part No.
	Br1 (1A)	SSG-004

6.2 CD SECTION

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5 %, and K = 10 %).

560 Ω→56 × 10^1 →561 ·· RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
47k Ω→47 × 10^3 →473 ·· RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5 Ω→0R5 ·· RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1 Ω→010 ·· RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω→562 × 10^1 →5621 ······································ RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

Miscellaneous Parts

Mark	Symbol & Description	Part No.
	EKEY	
	RMJB	
	SENS	
	PJAK	
	DJAK	
	FREC	
◉	ANLG	DWX1117
	DEGT	DWX1116
	MJSW	
	HRMB	
	REJC	
⚠	T201 Power transformer	DTT1037
⚠	FU201 Fuse (315mA)	REK-075
	Slide switch (DOWN LIMIT TRAY)	DSH1011
	Lever switch (CLAMP)	DSK1001
	Slide switch (INSIDE)	PSH1003
	Pickup assembly	PWY1009
⚠	AC power cord	DDG1026
	Hour meter	VCX-006
	Select motor assembly	DXX1358
	Motor (SLIDER DISC LOAD, DISC SELECT)	PXM1002
	Motor assembly	PYY1025
	Spindle motor assembly	DXX1361
	Semiconductive ceramic capacitor	CGDYX104M25

EKEY

SWITCHES

Mark	Symbol & Description	Part No.
	S301 – S303 Tact switch (EJECT (A, B, C))	DSG1009

RMJB

OTHERS

Mark	Symbol & Description	Part No.
	3P mini jack	DKN1028

SENS

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
	Q901	GP1A52HR

SWITCH

Mark	Symbol & Description	Part No.
	S901 Switch (UP LIMIT)	DSG1008

CAPACITOR

Mark	Symbol & Description	Part No.
	C901	CEJA100M16

RESISTORS

Mark	Symbol & Description	Part No.
	R901,R902	RD1/6PM□□□J

PJAK

OTHERS

Mark	Symbol & Description	Part No.
	JA601 2P pin jack	PKB1009

DJAK

CAPACITORS

Mark	Symbol & Description	Part No.
	C501 Capacitor array	DCG1007

OTHERS

Mark	Symbol & Description	Part No.
	4P mini DIN socket	VKN1072

FREC

OTHERS

Mark	Symbol & Description	Part No.
	CN401,CN402 FPC connector	5597-17APB

◉ ANLG (DWX1117)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC201	LC7881-C
	IC202,IC203	NJM4558D
	IC205	NJM7805FA
	IC204	NJM79L05A
	Q203,Q209	DTA124ES
	Q201,Q202,Q204	DTC124ES
	Q207,Q208	2SC1740S
	Q205,Q206	2SD1302
	D201	2W02-5008-L

COIL AND FILTERS

Mark	Symbol & Description	Part No.
	L201 Line filter	VTL-157
	F202 – F204 3 terminal filter	VTH1001

CAPACITORS

Mark	Symbol & Description	Part No.
	C201,C202 (0.01μF)	RCG-009
	C226	CEAS101M10
	C205	CEAS102M10
	C209,C210,C219,C220	CEAS220M50
	C204	CEAS222M16
	C221 – C225	CEAS330M16
	C206	CEAS471M10
	C203	CEAS472M16
	C227	CKCYF103Z50
	C207,C208	CQMA102J50
	C213,C214	CQMA471J50
	C215,C216	CQMA472J50
	C217,C218	CQMA683J50
	C211,C212	CQMA821J50

RESISTORS

Mark	Symbol & Description	Part No.
	All resistors	RD1/6PM□□□J

DEGT (DWX1116)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC1	CXA1081S
	IC2	CXA1082AS
	IC3	CXD1135QZ
	IC4	CXK5816PN-12L
	IC11	M51953BL
	IC5	PD0068
	IC6 – IC8,IC10	TA7256P
	Q1,Q3,Q5,Q12,Q14	DTA124ES
	Q10,Q16	DTC124ES
	Q9	2SA1399
	Q13	2SA933S
	Q7,Q8,Q11	2SC1740S
	Q2,Q4,Q6,Q15	2SC2497
	D4-D7	1SS254

CAPACITORS

Mark	Symbol & Description	Part No.
	C15,C16	CCCCH220J50
	C70 – C75	CCCCH221J50
	C10,C11,C33,C35,C38	CCCCH300J50
	C76 – C78	CEANP010M50
	C60	CEANP4R7M50
	C1,C43	CEASR47M50
	C23	CEAS010M50
	C32,C65	CEAS101M10
	C67	CEAS3R3M50
	C12,C13,C17,C21,C22,C26 – C31, C36,C37,C40,C45,C47,C48,C50,C57, C61,C62,C64,C68,C69,C79,C80	CEAS330M16
	C55	CEAS4R7M50
	C18 – C20,C24	CKCYB102K50
	C14,C25	CKCYF103Z50
	C3,C54	CQMA102J50
	C42,C44,C63	CQMA103J50
	C52,C53,C56,C59	CQMA104J50
	C46	CQMA272J50
	C41	CQMA332J50
	C2,C39,C49,C58	CQMA333J50
	C34,C51,C66	CQMA472J50

RESISTORS

Mark	Symbol & Description	Part No.
	VR8 Semi-fixed (1k)	VRTB6VS102
	VR2 Semi-fixed (10k)	VRTB6VS103
	VR3 – VR7 Semi-fixed (22k)	VRTB6VS223
	Other resistors	RD1/6PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	X1 Crystal resonator	DSS1010
	X2 Crystal resonator	PSS-012
	DL1,DL2 Delay line	PTF1012
	CN8 6P Top post	B6P-SHF-1AA
	CN4 8P Top post (NH)	B8P-SHF-1AA
	CN7 FPC connector	5597-17APB
	IC socket	VKH-029

MJSW

SWITCHES

Mark	Symbol & Description	Part No.
	S804 – S806 Slide switch	PSH1005
	S801 – S803 Push switch	PSH1008

HRMB

There is not supplied parts in this unit.

REJC

There is not supplied parts in this unit.

7. ADJUSTMENTS

7.1 MECHANICAL ADJUSTMENTS

7.1.1 MAIN SECTION

● Three sides of the menu synchronous adjustment (Fig. 7-1)

PREPARATIONS

- Adjust without installing the motor (menu).
- Fix center pulley to menu shaft with the screws.

(1) Apply synchro belt between synchro pulley and center pulley both on the right and left sides.
(2) While applying spring (tension) to under frame and tension plate, apply a tension to the synchro belt.
(3) Fix tension plate to under frame with screw①.
(4) By placing a flat plate such as a ruler on them, align the three surfaces of the menu with each other on the same level.
(5) Fix the menu shaft to the synchro pulley using a hexagornal wrench.
(6) Remove the plate placed on the menu and check the following items while turning the menu by hand.
  1. Check that the three surfaces of the menu rotate smoothly.
  2. Check that all the three surfaces align with each other on the same level after turning the menu shaft once.

● Adjustment of the stop position of menu rotation

PREPARATIONS

- Loosen the screw Ⓐ which holds the encoder disc using a hexagornal wrench.
- Loosen screw Ⓐ which holds the adjustment plate.
- Adjust with the motor (menu) attached.

(1) Set the gap between the encoder disc and photo interrupter of the motor (menu) to $1^{+0}_{-0.5}$ mm. (Fig. 7-2)
(2) Fix the screw of the encoder disc by tightening with a hex wrench.
(3) Turn screw Ⓑ so that the carved mark on the adjustment plate align with the underframe. Then temporarily tighten screw Ⓐ.
(4) Push the ROTATE MENU key on the front panel of the main unit so that menu rotates. Then, perform the following adjustments depending on the condition. (Fig. 7-3)
  - When the menu stops after extending past the front ········· Loosen screw Ⓐ, then tighten screw Ⓑ turning it clockwise.
  - When menu stops before reaching the front ········· Loosen screw Ⓐ and turn screw Ⓑ counterclockwise to loosen it.
(5) Turn the menu again and firmly tighten screw Ⓐ when the menu stops directing its surfaces to the front. (Fig. 7-4 ⓐ)
(6) Finally, turn the menu and check that the menu stops directing all of its three surfaces to the front at every 120° rotation.

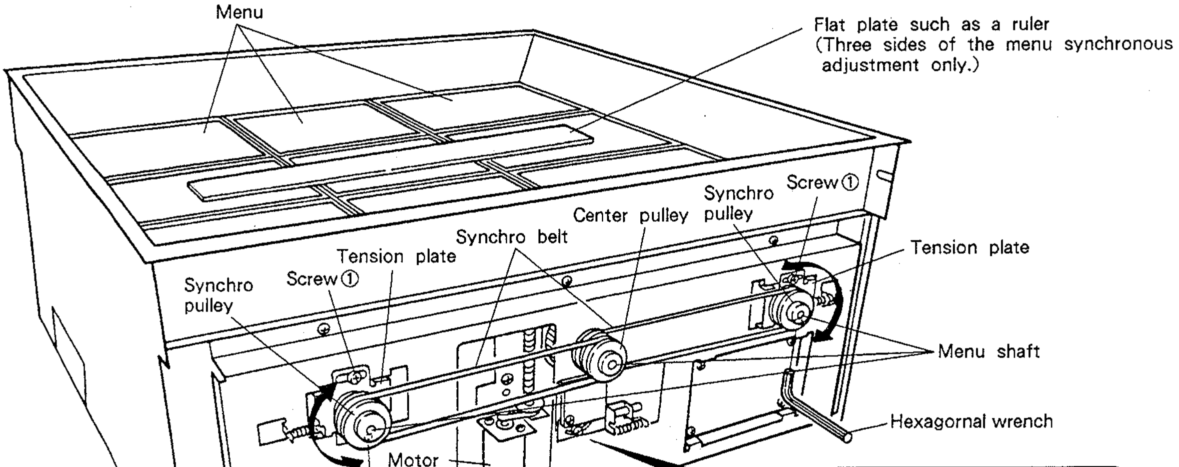

Menu
Flat plate such as a ruler (Three sides of the menu synchronous adjustment only.)
Synchro pulley
Screw①
Center pulley
Synchro belt
Tension plate
Synchro pulley
Screw①
Tension plate
Menu shaft
Hexagornal wrench
Motor (menu)
Hexagornal wrench
Underframe
Hexagornal wrench
Photo interrupter

Fig. 7-1

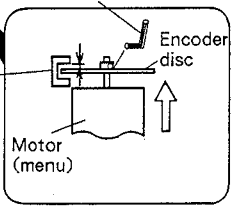

Encoder disc
Motor (menu)

Fig. 7-2

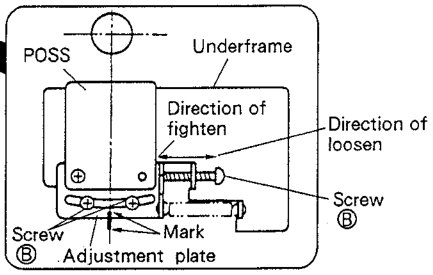

POSS
Underframe
Direction of fighten
Direction of loosen
Screw Ⓑ
Screw Ⓑ
Mark
Adjustment plate

Fig. 7-3

7.1.2 CD SECTION

PREPARATIONS

- Set a magazine in the first and third modules of the CD main unit.
- Connect remote control unit (RU-V101) to the CD main unit.

1. Rough adjustment of the select positon

(1) Align the distance from the upper side of the sensor plate to that of the main chassis to 7mm by turning screw Ⓐ.

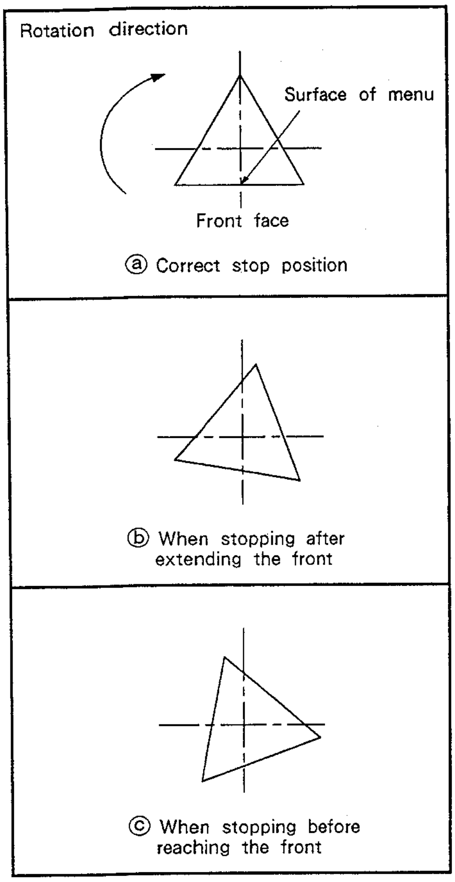
2. Adjustment of the select position

(1) First, proceed as follows.

① Press the 10keys in the sequence of $\boxed{1}$+$\boxed{8}$+STILL/STEP II▶ (DISC SELECT) key +STILL/STEP◀II (DISC RETURN) key. When the operation is completed, check that the gap between the top of the rotation lever and the upper side of the sixth tray in the magazine is $0.3^{+0.2}_{-0}$.

② If the distance is not within the specified range, turn screw Ⓐ to adjust the position of the sensor plate and press the 10keys again in the sequence of $\boxed{1}$+$\boxed{8}$+STILL/STEP II▶ (DISC SELECT) key + STILL/STEP◀II (DISC RETURN) key until the distance comes within the specified range.

③ Push the 10keys in the sequence of $\boxed{6}$+STILL/STEP II▶ (DISC SELECT) key +STILL/STEP◀II (DISC RETURN) key and check that the gap between the top of the rotation lever and the upper side of the sixth tray in the magazine is 0.3mm ± 0.1mm.


Rotation direction
Surface of menu
Front face

ⓐ Correct stop position

ⓑ When stopping after extending the front

ⓒ When stopping before reaching the front

Fig. 7-4

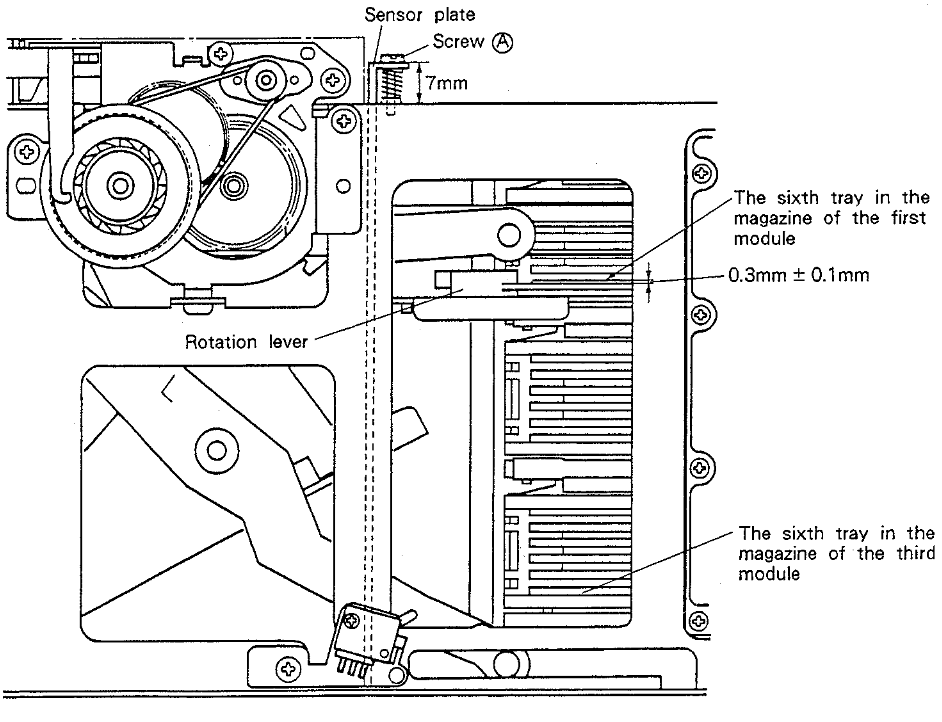

Sensor plate
Screw Ⓐ
7mm
The sixth tray in the magazine of the first module
0.3mm ± 0.1mm
Rotation lever
The sixth tray in the magazine of the third module

Fig. 7-5

7.2 ELECTRICAL ADJUSTMENTS

The adjustment items of this model should be performed in the order as shown below.

• Adjustment and check Items

1. Tracking offset focus offset and RF offset adjustmens
2. RF level adjustment
3. LD (Laser Diode) output power confirmation
4. Focus lock and spindle lock confirmation
5. Grating adjustment
6. Tracking balance adjustment
7. Tangential adjustment
8. Focus gain adjustment
9. Tracking gain adjustment
10. VCO free-run frequency adjustment
11. Method to confirm S character (FOCUS ERROR)

• Measuring Equipment

1. Dual trace oscilloscope
2. Laser power meter
3. Test disc (YEDS-7)
4. Tracking balance adjustment filter
5. Loop gain adjustment filter
6. Signal generator
7. Frequency counter
8. Other general tools
9. Remote control unit (RU-V101)

• Service Mode

The CD main unit can be operated independently when remote control unit (RU-V101) is connected to the unit.
For the operation, refer to Service manual (1) (ARP1912) : Service Mode (page 14).
Note: Before operating the remote control unit (RU-V101), move the mechanism by using a 10keys + STILL/STEP ||▶ (DISC SELECT) key to the position where the test disc has been placed.

• Adjustment VRs and their names

VR1 : Laser power
VR2 : RF offset (RF. OFS)
VR3 : Focus gain (FCS. GAN)
VR4 : Tracking gain (TRK. GAN)
VR5 : Tracking balance (TRK. BAL)
VR6 : Focus offset (FCS. OFS)
VR7 : Tracking offset (TRK. OFS)
VR8 : VCO adjustment (VCO. ADJ)

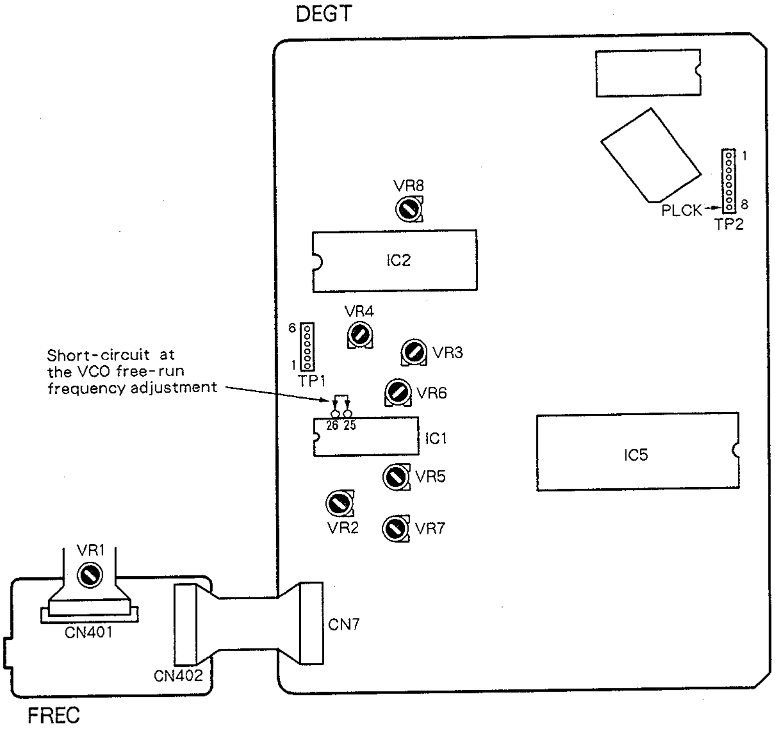
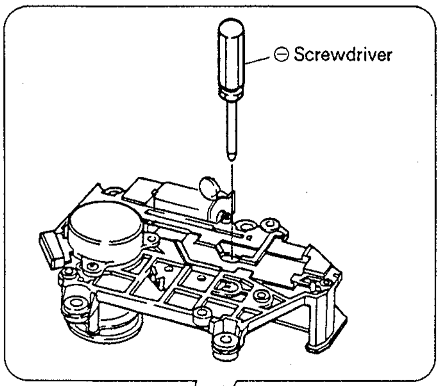
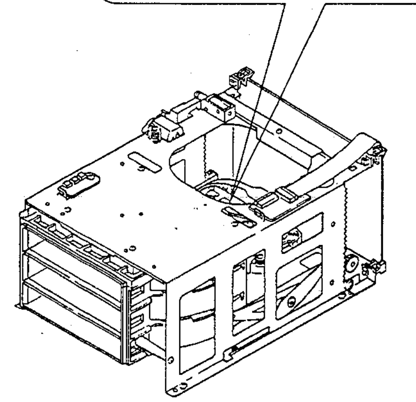
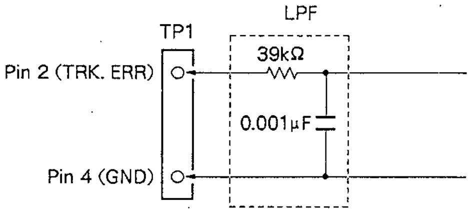


Fig. 7-6 Adjusting point

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
1	**TRACKING OFFSET, FOCUS OFFSET AND RF OFFSET ADJUSTMENT**					
						● Set to Service mode.
				VR5 (TRK. BAL)	Tracking offset 45°	● Turn VR5 TRK. BAL (Tracking balance) volume clockwise 45° from the center.
			TP1 Pin 2 (TRK. ERR)	VR7 (TRK. OFS)	0V ± 50mV	● Adjust with VR7 TRK. OFS (Tracking offset) volume so that the voltage of pin 2 TRK. ERR (Tracking error) of TP1 becomes 0V ± 50mV.
			TP1 Pin 6 (FCS. ERR)	VR6 (FCS. OFS)	FOCUS offset 0V ± 50mV	● Adjust VR6 FCS. OFS (focus offset) so that the FCS. ERR (focus error) voltage at TP1 pin 6 becomes 0V ± 50mV.
			TP1 Pin 1 (RF OUTPUT)	VR2 (RF. OFS)	RF offset 100mV ± 50mV	● Adjust VR2 RF. OFS (RF offset) so that the RF output voltage at TP1 pin 1 becomes 100mV ± 50mV.
2	**RF LEVEL ADJUSTMENT**					
						● Set to Service mode.
			TP1 Pin 1 (RF)			● Play TEST disc and connect probe of an oscilloscope to pin 1 RF (RF output) of TP1 and measure the P-P voltage of RF waveform.
				VR1 Laser power	1.5Vp-p $^{+0.2V}_{-0V}$	● Adjust VR1 (Laser power) so that the value is within 1.5Vp-p $^{+0.2V}_{-0V}$.
3	**LD (LASER DIODE) OUTPUT POWER CONFIRMATION**					
						● Set to Service mode.
						● Press −MULTI-SPEED+ key + 0 and turn ON LD (laser diode).
					Confirmation : less than 0.13mW	● Place sensor of the laser power meter immediately above the object lens and confirm that the output power of the LD is less than 0.13mW.
4	**FOCUS LOCK AND SPINDLE LOCK CONFIRMATION**					
						● Set TEST disc.
						● Set to Service mode.
						● Shift the pickup close to the center of the disc by pressing the −MULTI-SPEED+ key + 4. ＊ Note that this step must be performed.
	0.5V/div	100msec / div	TP1 Pin 1 (RF output)		RF output exists	● Observe pin 1 RF (RF output) of TP1 with an oscilloscope and confirm that the RF signal is output after pressing the −MULTI-SPEED+ key + 1.
					Normal rotation	● Press −MULTI-SPEED+ key + 2 and be sure that the disc rotates in normal direction at almost the specified spped (as it is close to the center of the disc, the rotating speed is around 300 rpm) and not rotates abnormally or inversely.

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
5	**GRATING ADJUSTMENT**					
	  Fig. 7-7					● Set to Service mode. ● Shift the pickup close to the center of the disc by pressing −MULTI-SPEED+ key + 4 so that the grating adjustment screw of the pickup can be seen through the oval hole of the upper side of the servo mechanism. ● Insert the ⊖ screwdriver into the adjusting hole from the upper side of the mechanism as shown in Fig. 7-7, and confirm that the grating screw turns. ● Press −MULTI-SPEED+ key + 1 and −MULTI-SPEED+ key + 2 sequentially and close the focus servo and spindle servo. (Do not close the tracking servo.) ● Observe the waveform of pin 2 TRK. ERR (Tracking error) of TP1 with an oscilloscope. At this point, insert a 4kHz cutoff low-pass filter. (Fig. 7-8)  LPF TP1 Pin 2 (TRK. ERR) 39kΩ 0.001μF Pin 4 (GND) Fig. 7-8
	0.5V/div	5msec /div	TP1 Pin 2 (TRK. ERR)	Grating	Null point	● Turn the ⊖ screwdriver and find null point. (Photo. 7-1)
				Grating	Maximum amplitude	● Then, turn slowly the ⊖ screwdriver counterclockwise from the null point and adjust at the point where the waveform (Tracking error signal) firstly becomes maximum amplitude. (See Photo. 7-2.) Note : If the ⊖ screwdriver is pressed strongly, the pickup moves toward disc center, accordingly adjustment becomes difficult. ● Finally, be sure to confirm that the tracking error signal (at this time, 4 kHz of cutoff low-pass filter is not inserted) when the pickup is moved toward the disc center and the P-P voltage of the tracking error signal at the outer circumference of the disc are not varied greatly. When the level is deviated over ±10 %, adjust again by turning grating screw to the maximum error amplitude point.

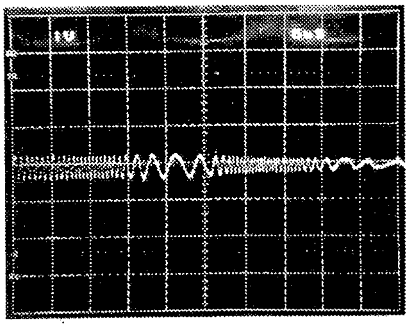


Photo. 7-1
Null point

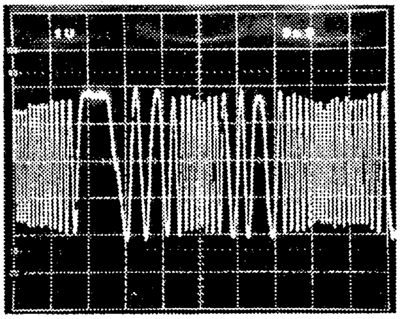


Photo. 7-2
Maximum amplitude

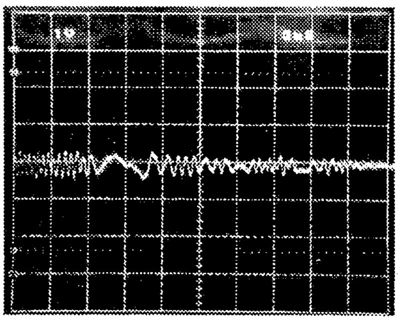


Photo. 7-3
This is not the null-point waveform

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
6	**TRACKING BALANCE ADJUSTMENT**					
	0.5V/div	5msec / div	TP1 Pin 2 (TRK. ERR)	VR5 (TRK. BAL)	(TRK. ERR)	● Set the TEST disc. ● Set to Service mode. ● Shift the carriage close to the center of the disc by pressing $\boxed{\text{−MULTI-SPEED+}}$ key + $\boxed{4}$. ● Press $\boxed{\text{−MULTI-SPEED+}}$ key + $\boxed{1}$ and $\boxed{\text{−MULTI-SPEED+}}$ key + $\boxed{2}$ to start turning the disc. ● Observe pin 2 TRK. ERR (Tracking error) of TP1 with an oscilloscope and adjust with VR5 TRK. BAL (Tracking balance) volume so that the DC component of the tracking error disappears. Note : Before proceeding with the above adjustments, be sure to adjust the tracking error offset.

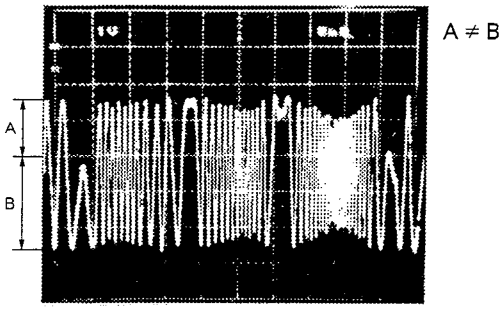


Photo. 7-4 DC elements mixed in signal

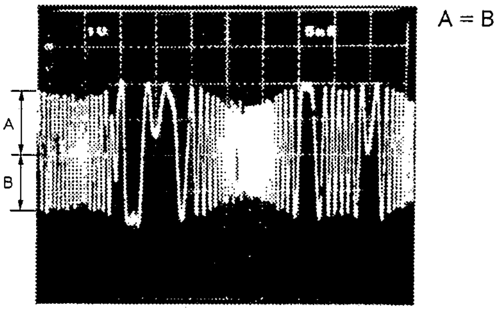
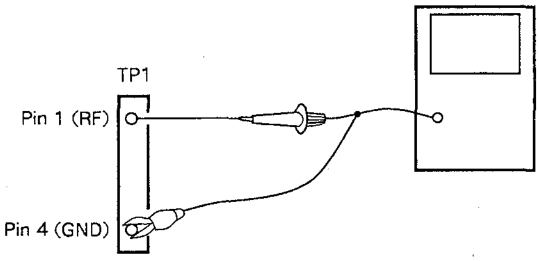
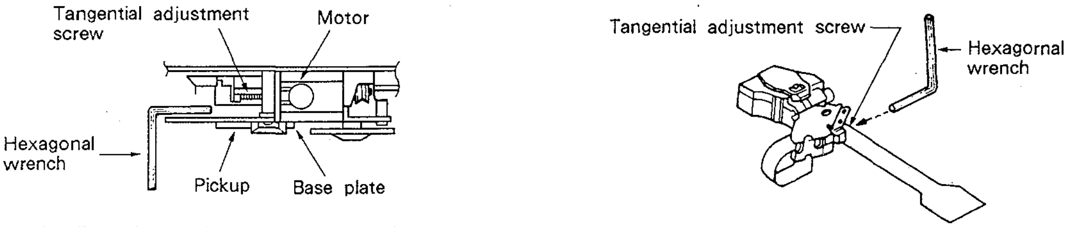


Photo. 7-5 DC elements eliminated

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
7	**TANGENTIAL ADJUSTMENT**					
		200nsec / div	TP1 Pin 1 (RF output)	Tangential adjustment screw	Best eye pattern	● Set the TEST disc. ● Set to Service mode. ● Shift the pickup close to the center of the disc by pressing −MULTI-SPEED+ key + 4. ● Press −MULTI-SPEED+ key + 1, −MULTI-SPEED+ key + 2 and −MULTI-SPEED+ key + 3 sequentially, and close all the servos. (Pause indicator lights up.) ● Observe pin 1 RF (RF output) of TP1 with an oscilloscope and adjust with the tangential screw so that the eye pattern becomes clear. (Fig. 7-9 and 7-10) ● The adjusting point is the middle point between the point where the eye pattern becomes deteriorate by turning the tangential screw clockwise and the point where the eye pattern becomes deteriorate by turning the tangential screw counterclockwise. As a criterion, observe that the overall waveform is clear and one of the diamond shapes within the eye pattern (Photo. 7-7), and adjust at as an optimum point where the diamond shape is seen relatively fine line.  Fig. 7-9 Note : During the adjustment, hold hexagonal wrench to upward so as to keep the pickup body not goes down.



In the figure below, the top and bottom is opposite to that of the actual product.

Fig. 7-10 Tangential adjustment

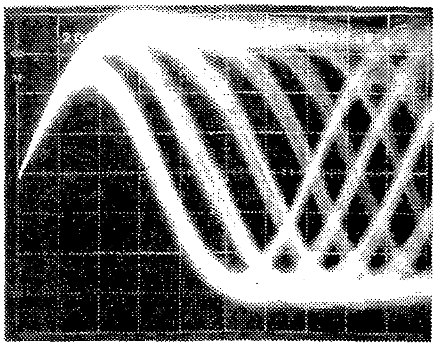


Photo. 7-6

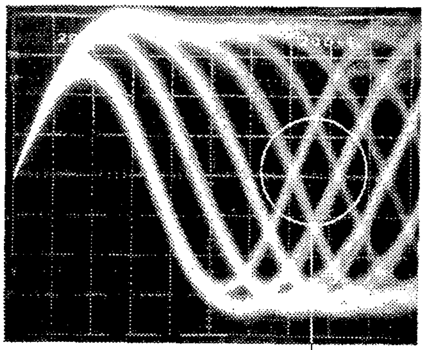


Photo. 7-7

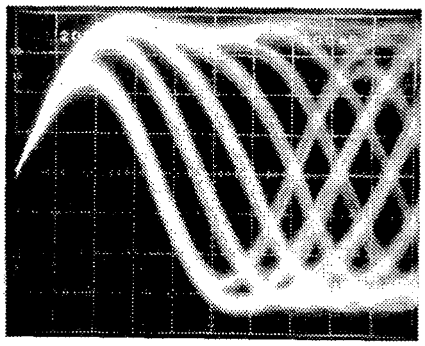
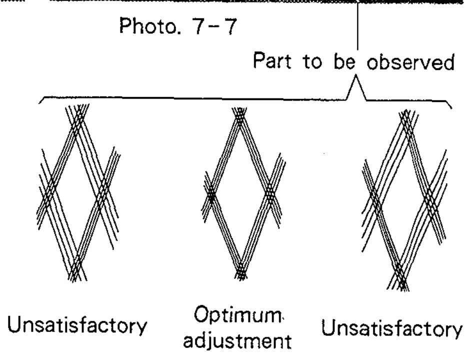


Photo. 7-8



Part to be observed
Unsatisfactory
Optimum adjustment
Unsatisfactory

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
8	**FOCUS GAIN ADJUSTMENT**					
	20mV/div, 5mV/div. CH1 (X), CH2 (Y) (Probe 10 : 1)		X axis : TP1 Pin 5 (FCS. IN) Y axis : TP1 Pin 6 (FCS. ERR)	VR3 (FCS. GAN)	Phase difference 90°	● In the POWER OFF state, connect an oscilloscope and oscillator as shown in Fig. 7-11. ● Set the unit to the normal PLAY mode. ● Turn the POWER of oscillator ON and output 1.2kHz 1Vp-p. Note : Depending upon oscillators, some of them output DC when their power turned ON. Therefore, it is desirable to connect oscillator after turning the power ON. ● Adjust with VR3 FCS. GAN (Focus gain) volume so that the lissajous figure of the oscilloscope becomes horizontal circle (Phase difference 90°).

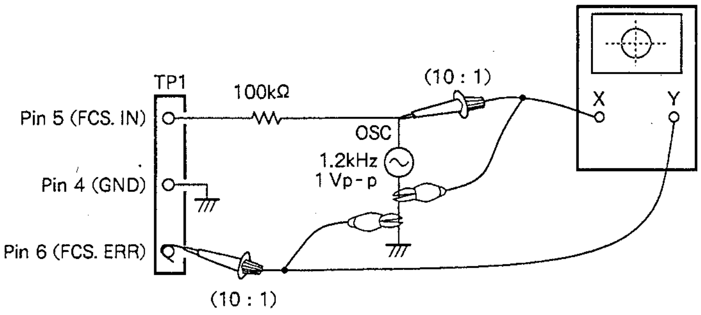


Fig. 7-11

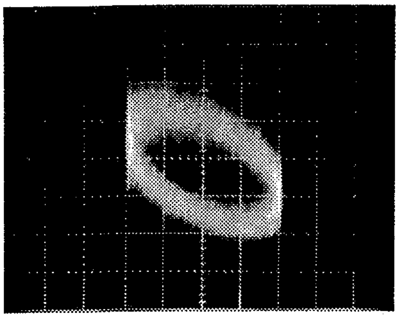


Photo. 7-9
Gain overcompensated

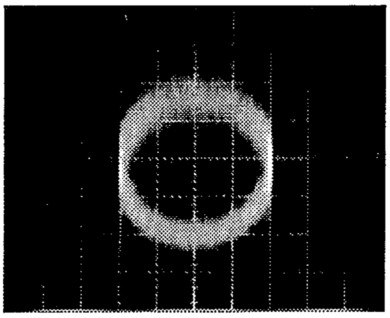


Photo. 7-10
Gain optimum

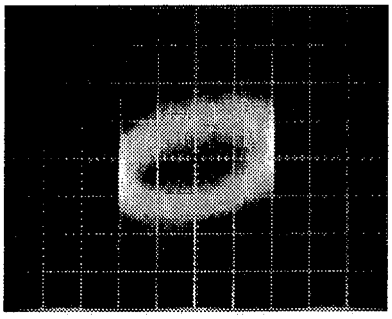


Photo. 7-11
Gain undercompensated

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment spécifications	Adjustment procedure
	V	H				
9	**TRACKING GAIN ADJUSTMENT**					
	50mV/div, 5mV/div. CH1 (X), CH2 (Y) (Probe 10 : 1)		X axis : TP1 Pin 3 (TRK. IN) Y axis : TP1 Pin 2 (TRK. ERR)	VR4 (TRK. GAN)	Phase difference 90°	● In the POWER OFF state, connect an oscilloscope and oscillator as shown in Fig. 7-12. ● Set the unit to the normal PLAY mode. ● Turn the POWER of oscillator ON and output 1.2kHz 2Vp-p. Note : Depending upon oscillators, some of them output DC when their power turned ON. Therefore, it is desirable to connect oscillator after turning the power ON. ● Adjust with VR4 TRK. GAN (Tracking gain) volume so that the lissajous figure of the oscilloscope becomes horizontal circle (phase difference 90°).

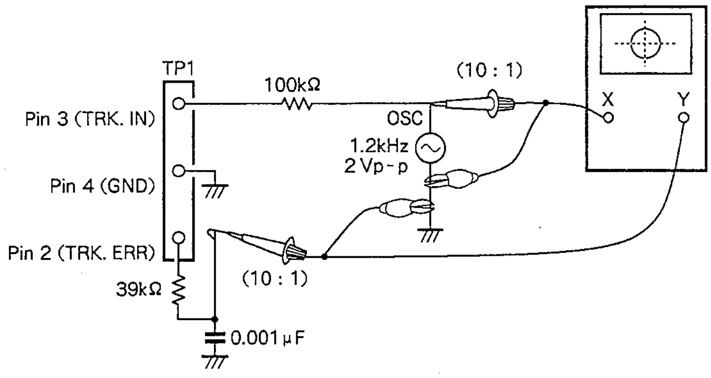


Fig. 7-12

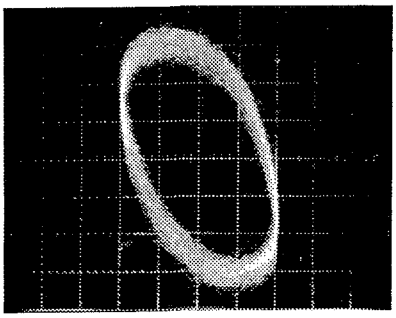


Photo. 7-12
Gain overcompensated

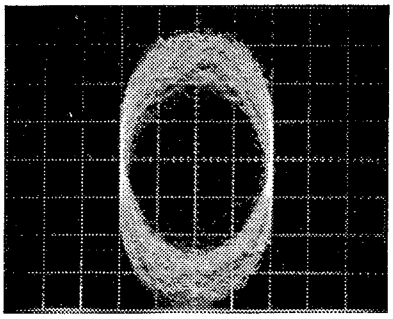


Photo. 7-13
Gain optimum

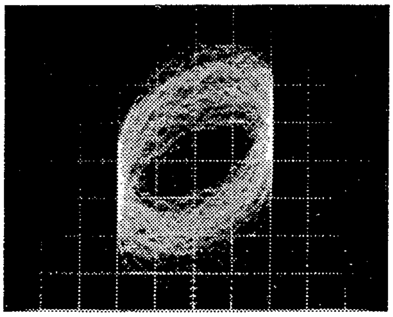


Photo. 7-14
Gain undercompensated

Step No.	Oscilloscope Setting		Test Points	Adjusting Points	Check items/ Adjustment specifications	Adjustment procedure
	V	H				
10	**VCO FREE RUN FREQUENCY ADJUSTMENT**					
			TP2 Pin 8 (PLCK)	VR8 (VCO. ADJ)	4.275 ± 0.01MHz	● Set to Service mode. ● Short-circuit between pin 25 and pin 26 of IC1 in the DEGT assembly with ⊖ screwdriver, etc. (Fig. 7-6) ● Connect frequency counter, which is measurable over 10MHz, to pin 8 of TP2 (PLCK). ● Adjust with VR8 VCO. ADJ (VCO adjustment) volume so that the value of frequency counter becomes 4.275 ± 0.01MHz.
11	**METHOD TO CONFIRM S CHARACTER (FOCUS ERROR)**					
			TP1 Pin 6 (FCS. ERR)			● Set to Service mode. ● Short-circuit between pin 5 FCS. IN (Focus in) of TP1 and GND. ● Press $\boxed{-\text{MULTI-SPEED}+}$ key + $\boxed{1}$ and observe the waveform of pin 6 FCS. ERR (Focus error) of TP1 at that time with an oscilloscope.

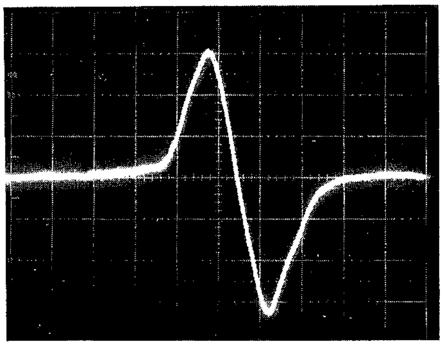


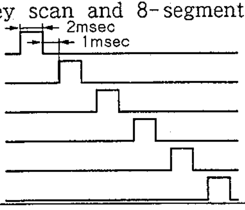
Photo. 7-16 Focus error

8. IC DESCRIPTION

■ PD0073

System control

• Pin functions

Pin	Pin name	I/O	Function
1	Vcc		+ 5V power supply (± 5%)
2	DRV6	O	Key scan and 8-segment LED drive. 
3	DRV5		
4	DRV4		
5	DRV3		
6	DRV2		
7	DRV1		
8	SLP1	O	CD player channel selecter. Control the IC4.
9	SLP0		
10	N.C.	O	Non connection
11	N.C.		
12	N.C.		
13	N.C.		
14	N.C.		
15	N.C.		
16	N.C.		
17	COUNT	O	Mechanical counter drive output
18	BUZZER	O	Buzzer drive output
19	COIN	I	Money received signal from the coin acceptor Normal : 1 Money received : 0 for about 45 through 50msec.
20	TxD	O	Asynchronous serial Baud rate : 4800bps Data bit : 8bit Stop bit : 1bit Command transmission to the CD player.
21	RxD	I	Asynchronous serial Baud rate : 4800bps Data bit : 8bit Stop bit : 1bit Status reception from the CD player.
22	TmrXin	I	Pulse signal input for control the menu board rotation. Normal speed 1.6kHz.
23	INT2	I/O	Generally, use for the port. Set to input at the rising up the power only, and estimate the OFF time of the power either discharge the capacitor or not. After the confirmation, output 1 and charge it. This function is for clearing the music selection and credit of the previous day.
24	N.C.	O	Non connection

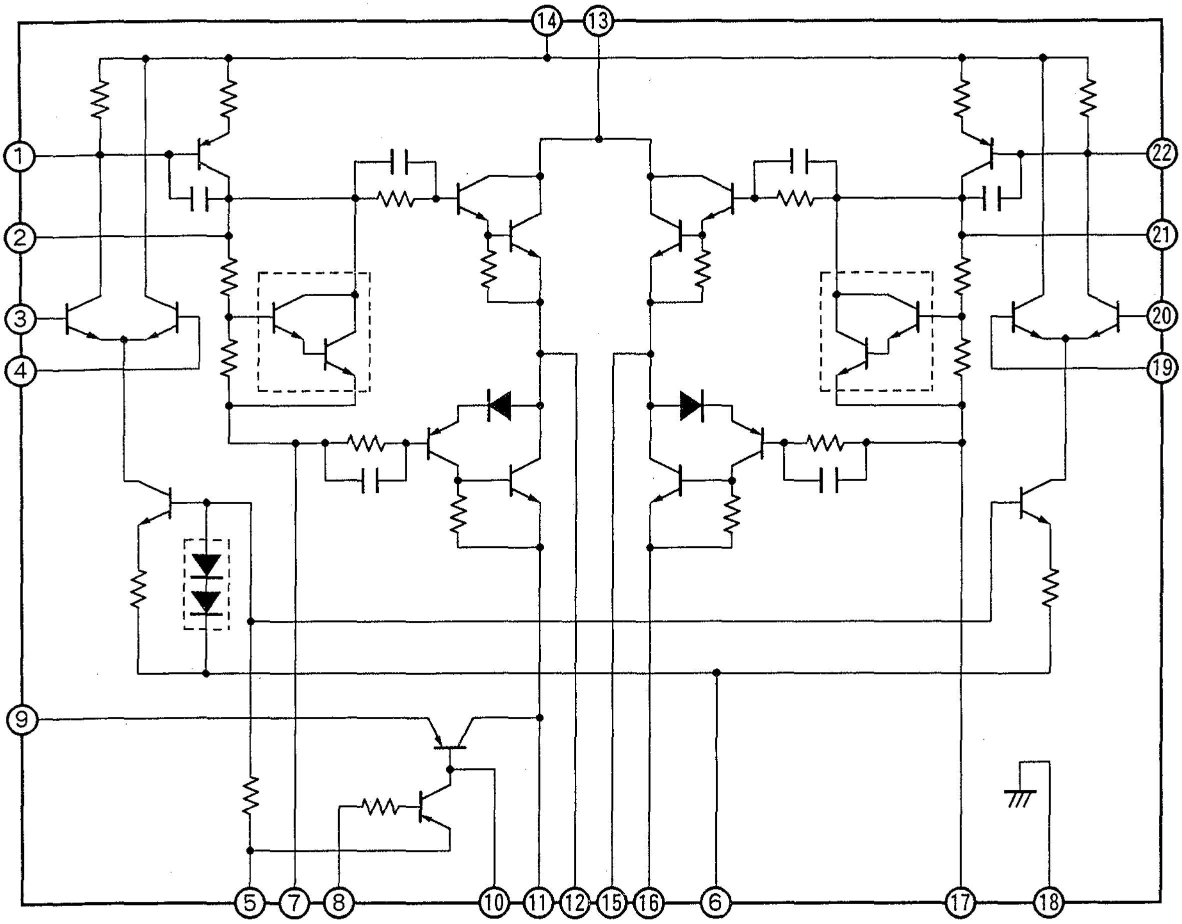
SLP0	SLP1	ON channel of IC4	CD player
1	1	Y0, X0	PL1
1	0	Y1, X1	PL2
0	1	Y2, X2	PL3
0	0	Y3, X3	N.C.

Pin	Pin name	I/O	Function
25	R/W	O	Bus timing signal for access the ROM peripheral.
26	INT1	I	Interrupt signal by diode OR to the input signal of the coin and bill.
27	CNVss		Connect to Vss
28	RESET	I	Reset input
29	Xin	I	Clock input
30	Xout	O	Clock output
31	φ	O	Bus timing signal for access the ROM peripheral.
32	Vss		GND 0V
33	DTR3	I	Data terminal ready from the CD player 3. 0 at connecting the CD player.
34	DTR2	I	Data terminal ready from the CD player 2. 0 at connecting the CD player.
35	DTR1	I	Data terminal ready from the CD player 1. 0 at connecting the CD player.
36	DOOR	I	Door switch input. 0 at close.
37	ROTASW	I	Rotation stop position signal of the menu board. 0 at stop position.
38	KEY3	I	Key scan input.
39	KEY2		
40	KEY1		
41	A15	O	Address of IC3 Address bus for access the IC3 (RAM) and IC2 (I/O controller) peripheral. Address RAM : IN3 2000 − 3FFF Peripheral : IC2 4000 − 4007
42	A14		
43	A13		
44	A12		
45	A11		
46	A10		
47	A09		
48	A08		
49	A07		
50	A06		
51	A05		
52	A04		
53	A03		
54	A02		Address of IC2
55	A01		
56	A00		
57	D07	I/O	Data bus for access the IC3 (RAM) and IC2 (I/O controllwe) peripheral.
58	D06		
59	D05		
60	D04		
61	D03		
62	D02		
63	D01		
64	D00		

STK4231-2

2 channel AF power amplifier

● Block diagram


14
13
1
2
3
4
9
22
21
20
19
5
7
8
10
11
12
15
16
6
17
18

■ CXD1095Q

I/O controller

● Pin function

Pin	Pin name	I/O	Function
1			Non connection
2			Non connection
3	$ 5	I	Bill validator signal
4	UP SW	I	VR UP key input from the wired-remote control.
5	DOWN SW	I	VR DOWN key input from the wired-remote control.
6	UP	O	Auto VR : Signal for increase the volume.
7	DOWN	O	Auto VR : Signal for decrease the volume.
8	OVER	O	Signal for bill box becomes full.
9	REJECT	O	Coin box reception prohibition signal.
10	Vss		(GND)
11	PC0	I	Input port from the DIP switch.
12	PC1		
13	PC2		
14	PC3		
15	PC4		
16	PC5		
17	PC6		
18	PD7		
19			Non connection
20	SEG 'dp'	O	Segment drive signal of the 7-seg LED.
21	SEG 'g'		
22	SEG 'f'		
23	SEG 'e'		
24	SEG 'd'		
25	Vss		(GND)
26	VDD		(+5V)
27	SEG 'c'	O	Segment drive signal of the 7-seg LED.
28	SEG 'b'		
29	SEG 'a'		
30	D0	I/O	Data bus for access the RAM and microcomputer.
31	D1		
32	D2		
33			Non connection
34			Non connection
35	D3	I/O	Data bus for access the RAM and microcomputer.
36	D4		
37	D5		
38	D6		
39	D7		
40	CLR	I	Non connection (pull up at the internal)
41	OPEN	I	Enable signal of the data transmission and reception with the microcomputer.
42	Vss		(GND)
43	$\overline{\text{WR}}$	I	Timing signal for access the RAM and microcomputer.
44	$\overline{\text{RD}}$ ($\overline{\text{OE}}$)		
45	CS		
46	A0	I	Address bus for access the RAM and microcomputer.
47	A1		
48	A2		
49	SL1	O	Selection control signal of CDP audio input.
50	SL0		
51			Non connection
52	FULL	I	Bill validator signal. (Not used)
53	CANCEL SW	I	Cancel key input from the wired-remote control.
54	DEP	O	LED display output signal. "DEPOSIT CASH"
55	MAKE	O	LED display output signal. "MAKE SELECTION"
56	PUSH	O	LED display output signal. "ROTATE MENU"
57			(GND)
58			(+5V)
59	NUM	O	LED display output signal. Numeric keys.
60	BHT	O	LED display output signal. "BEST HITS"
61	CLR	O	LED display output signal. "CLEAR"
62	MENU	O	Motor drive signal for rotate the menu board.
63	MUTE	O	Audio mute signal.
64	$ 1	I	Bill validator signal.

9. NOTES ON REPLACING THE LITHIUM CELL AND RAM (IC3 : TC5564APL-15)

- When replacing the Lithium cell (DEM1001) in the CONT unit of the commander block, clear RAM data in the following manner.
  If the data is not cleared, a malfunction may occur.

● How to clear

1. Set the power switch to OFF and all the function switches of the commander block to ON.
2. While simultaneously pressing four keys, the volume + and − keys and the cancel A and B keys on the remote control unit, set the power switch to ON. A buzzer sounds in a few seconds, indicating that the clear operation is completed.
   (Note : An error may occur if you set the power switch to OFF while pressing these four keys.)
   When the data is cleared, the rate settings return to their default values (3 tunes/1$, 18 tunes/5$) and all other data become 0.
   Be careful when performing this operation as it sets even the non-resettable data all to 0.